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BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH AT NEW DELHI

ORIGINAL APPLICATION NO. 363 OF 2022

IN THE MATTER OF:-

Vikrant Tongad & Anr.

... Applicants

Versus

State of Uttar Pradesh & Ors.

... Respondents

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Proof of Service

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THROUGH



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Dated:- 07.09.2024

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OBJECTIONS ON BEHALF OF THE APPLICANTS TO THE ADDITIONAL REPLY DATED 09.08.2024 FILED BY RESPONDENT NO. 4, GREATER NOIDA INDUSTRIAL DEVELOPMENT AUTHORITY, ADDITIONAL REPLY DATED: 08.08.2024 FILED BY RESPONDENT NO. 5, MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE AND RESPONDENT NO. 3, NOIDA AUTHORITY

The Applicants above-named

MOST RESPECTFULLY SHOWETH:

1. That vide Order, dated: 21.08.2024, this Hon'ble Tribunal, had permitted the Applicants to file Rejoinder/Response to the Additional replies dated: 09.08.2024 and 08.08.2024 filed by Respondent Nos. 4 and 5, respectively.
2. That the Applicants crave leave of this Hon'ble Tribunal to a file a common Response to the afore-dated replies of Respondent Nos. 4 and 5, as also a short response to the Reply, dated: 06.08.2024 of Respondent No. 3, Noida Authority.
3. That the present objections are in addition to the submissions made in the Original Application as well as the Submissions, dated: 07.10.2022 and the Brief Submissions, dated: 21.02.2024 made by the Applicants.
4. That at the outset it is submitted that any concretization/paving of the roadsides, roadberms and open soft areas with interlocking tiles, or otherwise, is highly deleterious and an irreversible hazard to the ecology and environment, in as much as the same tends to inter alia obstruct rainwater infiltration and consequent groundwater recharge, causes run-off, urban flooding, severe water

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logging, eliminates biodiversity, creates Urban Heat Islands, trapping of heat generated in the atmosphere, reduction of soft urban spaces for plantations, compaction and degradation of soils, loss of soil (a major Carbon sink) and organic matter, therein, and increases the concentration and accumulation of Carbon (in the form of Carbon dioxide, a major Greenhouse gas) in the atmosphere, which in turn, leads to warming of the atmosphere.

5. That indiscriminate and mindless concretization/paving of roadsides, roadberms and open soft areas has, today, become the most serious and emergent threats to the urban ecology and environment.
6. That it is further submitted that grassing or vegetation or landscaping of the roadsides/roadberms is ecologically and environmentally productive and sustainable and is the critical needs of the hour in light of no or negligible ground water recharge, rising air pollution and heat and increasing extreme precipitation (notably rainfall) amid Climate A Concretised/paved surface only tends to scatter/disperse pollutants as against grasses, which have a strong tendency to increase the water percolation rates and absorb all pollutants/particles, which, otherwise gives rise to PM10 levels and a consequently, high AQI.
7. That this Hon'ble Tribunal, vide Order, dated: 30.07.2018, in E.A. No. 34/2017, in O.A. No. 165/2013, *Akash Vashishtha Vs. Union of India & Ors.* in recorded that the MOEF&CC submits that they concur with the Policy Guidelines with respect to non-concretization of open spaces.

This Hon'ble Tribunal recorded as follows:

“The Learned Counsel for MoEF & CC submits that they concur that the Policy Guidelines dated 23rd March, 2018 in respect of non-concretization of open spaces. Therefore, in view of the above, the compliance has been substantially made and nothing remains to be adjudicated in this case as the grievance of the Applicant is redressed.

...”

(A True copy of the Order, dated: 30.07.2018, passed by this Hon'ble Tribunal, in E.A. No. 34/2017, is annexed herewith and marked as ANNEXURE A-4 to the Original Application)

8. That the State of Uttar Pradesh issued a Government Order, dated: 23.03.2018, issued in pursuance of Order(s) passed in E.A. No. 34/2017 and O.A. No. 165/2013, *Akash Vashishtha Vs. Union of India & Ors.*, to limit the concretization of areas along the sides of the roads. The Government Order, inter alia, states the following in so far as the paving/concretization of roadsides and roadberms is concerned:

“3. CORNERS OF ROAD (ROADSIDE)

(b) 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.”

(Emphasis supplied)

9. That the Respondent No. 3, Noida Authority as well as Respondent Nos. 4, Greater Noida Industrial Development Authority (GNIDA) continue to violate the aforesaid Government Order with impunity. It is submitted that most of the photographs annexed by the Applicants in the Original Application as well as Submissions, dated: 07.10.2022 are the concretization/paving works carried out by the two Respondents, in complete violation of the said GOs.
10. That the Noida Authority and Greater Noida Authority are constructing/concretizing the entire roadsides and roadberms in Noida and Greater Noida, respectively, much in excess of the limits prescribed, that is up to a maximum of 0.50 metres on both sides of the road and further with cemented interlocking tiles and blocks that are prohibited by the said Government Order.
11. That the Respondent No. 3, Noida Authority as well as Respondent Nos. 4, Greater Noida Industrial Development Authority (GNIDA) are only attempting to conceal their wrongdoings and misguide this Hon'ble Tribunal by claiming compliance with the Government Order, dated: 23.03.2018, as well as with the Orders and directions passed by this Hon'ble Tribunal.
12. That only a minuscule deconcretization/depaving has been carried out by Respondent Nos. 3 & 4 and which, too, has been done around a few trees, which is not even a fraction of the total soft, vegetated spaces concretized by the two authorities in Noida and Greater Noida.

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13. That 99% of the indiscriminately and excessively concretized/paved roadsides, roadberms and other surfaces have not been touched and the same exist in the form, they were.

(Geo-tagged photographs of some of the roadsides/roadberms in Noida and Greater Noida, most of them taken after the last date of hearing, i.e. 21.08.2024, are annexed herewith and marked as **ANNEXURE O-1**)

14. That it is submitted that no deconcretization/depaving of roadsides and roadberms, other than some spaces around the trees and which, too, in just a few pockets, has been carried out by the Noida and Greater Noida Authority.
15. That the act of indiscriminate, mindless and excessive concretization carried out by the Noida and Greater Noida Authority does not have any reasonable nexus with the object sought to be achieved by such an exercise, which is containing dust pollution. On the contrary, any concretized/paved surface only tends to scatter/disperse dust particles and pollutants and degrade the soil, leaving it completely unfertile and unproductive for any urban plantations. Such act of concretization/paving is indeed counter-productive, only enhancing the levels of pollution and the Carbon content in the atmosphere by reducing the soil's ability to store and sequester Carbon.
16. That no attempts to minimise surface run-off of precious rainwater and 'Catch-the-Rain' have been made by the Respondents on the roadsides and this year, too, despite groundwater level alarmingly declining, more than 90 percent of precious rainwater falling on the roads has been once again lost to run-off into dirty choked drains. The annual phenomenon of urban flooding even with the lightest showers has plagued Noida and Greater Noida, this year as well.
17. That the Respondent No.5, MOEF&CC, has only shrugged off its responsibilities by failing to take any measure under Section 3 of the Environment (Protection) Act, 1986, and/or issue directions under Section 5 of the said Act to check and abate this grave ecological and environmental hazard and rejuvenate/restore/vegetate the excessively concretized/paved

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roadsides and roadberms in Noida, Greater Noida or even elsewhere in the country.

18. That this Hon'ble Tribunal, further, while dealing with air pollution, vide Judgment, dated: 10.11.2016, in O.A. No. 21/2014, *Vardhaman Kaushik Vs Union of India & Ors.* had directed the government authorities to ensure greenery around the flyovers and roads by covering the open land with grass.

The relevant parts of the Judgment, dated: 10.11.2016 are reproduced as under:

“

...

18. We direct NCT of Delhi, DDA, all Corporations and PWD to ensure that all its parks, flyovers, roads around the government building, there is greenery and study has been conducted and found that if greenery is spread over all the flyovers and roads of NCT of Delhi, it will help in increasing of oxygen by 20%. It will help a large number of people to breathe fresh air. Efforts should be made to cover open land with green grass.

...

”

(Emphasis supplied)

19. That the act of indiscriminate concretization of the roadsides and roadberms in Noida and Greater Noida has been in violation of the Judgment, dated: 10.11.2016, passed by this Hon'ble Tribunal in O.A. No. 21/2014, *Vardhaman Kaushik Vs Union of India & Ors.*
20. That this Hon'ble Tribunal, again, vide Order, dated: 03.12.2020, in O.A. No. 283/2020, *R.S. Virk Vs. Central Pollution Control Board*, while dealing with the issue of dust pollution, directed all local bodies in the NCR experiencing poor and above air quality to plant grass, raise small herbs and shrubs on the sides of the pavements/road shoulders and on open dusty areas, including the areas on the sides of the pavements/right of way.

This Hon'ble Tribunal, vide Order, dated: 03.12.2020, held as follows:

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“ ...

7. *In view of acknowledged fact that dust pollution is significant component of air pollution and sweeping of roads is one of the sources of dust pollution sprinkling of water before sweeping of roads including the pavements needs to be explored, as directed by the Hon'ble Supreme Court quoted above.*

...

Further mitigation which may be considered is planting of grass/raising small herbs and shrubs on the sides of the pavements and on open dusty areas including the areas on the sides of the pavements.

8. *Accordingly, we direct all the Municipal Corporations/Local Bodies in NCR where air quality levels are normally non-compliant and in all other cities with the air quality 'poor' and above to take necessary steps to ensure sprinkling of water before sweeping of roads, using treated water from STPs, and take further steps of planting of grass/raising small herbs and shrubs on the sides of the pavements/road shoulders and on open dusty areas, including the areas on the sides of the pavements/right of way.*

... ”

(Emphasis supplied)

21. That the act of concretization of the roadsides and roadberms in Noida and Greater Noida is in gross contravention of the Order, dated: 03.12.2020, passed by this Hon'ble Tribunal in O.A. No. 283/2020, *R.S. Virk Vs. Central Pollution Control Board*.
22. That this Hon'ble Tribunal vide Order, dated: 17.07.2023, in O.A. No. 175/2022, *Vijay Kishor Goswami Vs. State of Uttar Pradesh & Ors.*, while dealing with the issue of indiscriminate concretization of roadsides and roadberms in Vrindavan, had directed the compliance of the Government Order, dated: 23.03.2018, issued by the State of Uttar Pradesh, in letter and spirit.

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This Hon'ble Tribunal, in the aforesaid case, had directed as follows:

“1. The main question raised in this application is 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 Vihar and along Yamuna Parikrama Marg in violation of the orders of this Tribunal in OA No. 165/2013, Akash Vashishtha vs. Union of India and the G.O. dated 23.03.2018 issued by the State of Uttar Pradesh.

...

16. ... we direct that the G.O. issued by the State of Uttar Pradesh with regard to concretization and Guidelines issued for Greening of Urban Areas and Landscaping must be complied in letter and spirit.

...”

(Emphasis supplied)

(A True Copy of the Order, dated: 17.07.2023, passed by this Hon'ble Tribunal in O.A. No. 175/2022, *Vijay Kishor Goswami Vs. State of Uttar Pradesh & Ors.* is annexed herewith and marked as **ANNEXURE O-2**)

23. That considering the issue of reckless and indiscriminate concretization in Ludhiana and other cities of Punjab, this Hon'ble Tribunal, vide Judgment, dated: 30.01.2024 had observed as under:

“ ...

16. We are of the view that even concretization /tiling of road berms beyond footpath and central verge of the roads/pathways also needs to be avoided and appropriate landscaping with plantation of grass, shrubs, flowering plants may be done which will not only allow drainage of water from the metallised portion of the road to the same and help in recharging of ground water but also add to aesthetics of the road without hampering the prospect of widening of the road if so required.

17. In view of the above Chief Secretary to Government of Punjab is directed to issue appropriate instructions within one

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month to all the Municipal Bodies/Civic Agencies/Government Departments/Gram Panchayats to ensure:-

(i) That all the sign boards, names, advertisements, any kind of boards or signages, electric wires and high tension insulated cables etc. placed on trees are removed within one month from the date of issuance of the instructions;

(ii) That the trees which are already concretized are de-concretized, manually without use of JCB machines etc so that the roots and trunks are not damaged, by leaving soil filled space of one meter radius to allow percolation of water to the roots thereof within two months from the date of issuance of the instructions;

(iii) That during fresh construction of roads/ pavements etc, a fresh clause is added in the tender documents that one meter area around the trees shall be left de-concretized/soil filled to allow percolation of water to the roots and that.

(iv) That concretization of road berms beyond footpath and central verge of the roads/ pathways be avoided and appropriate land scaping with plantation of grass, shrubs, flowering plants may be done, as may be viable.

...”

(Emphasis supplied)

(A True Copy of the Order, dated: 30.01.2024, passed by this Hon’ble Tribunal in O.A. No. 378/2022, *Mr. Sahil Garg Vs. State of Punjab & Ors.* is annexed herewith and marked as **ANNEXURE O-3**)

24. That it has, therefore, been the consistent position, held vide aforementioned Orders of this Hon’ble Tribunal that the open land, including the road berms and roadsides cannot be concretised/paved and are required to be, necessarily kept green and vegetated.
25. That several European cities such as London, Leuven, Belgium, Paris, as well as cities in U.S., Canada and Australia such as Portland, Oregon, Hamilton in Ontario, Melbourne are now actively deconcretizing, depaving and desealing the surfaces by removing concrete and pavements, therefrom and replacing the same with plants and soil.

26. That according to a News story, titled, “*The cities stripping out concrete for earth and plants*”, dated: 23.02.2024, published by the BBC, the depaving activity began in 2008, so as to make cities and towns resilient to summer heat waves, allow water to soak into the ground, which reduces flooding, aiding the sponginess of cities and to create spaces better for nature.

The relevant excerpts of the News Article are extracted as under:

“ ...

It feels like you're liberating soil," she says, recalling the summer gathering where she and around 50 volunteers removed roughly 1,670 sq m (18,000 sq ft) of concrete from the grounds of a local church. "It's envisioning and fully realising a dream that I think we all have," says Rose. The dream, that is, of bringing nature back into our midst. The idea of depaving, sometimes known as desealing, is a simple one – replace as much concrete, asphalt and other forms of hard landscaping as possible with plants and soil. It's been around since at least 2008, when the Depave group in Portland was founded. Proponents say depaving allows water to soak into the ground, which reduces flooding in times of heavy rain – aiding the "sponginess" of cities. Native plants help wildlife cling on in urban spaces, and by planting trees you can increase shade, protecting residents from heatwaves. Injecting city streets with greenery may even improve people's mental health, too.

With the climate crisis deepening, some cities and even entire regions are beginning to adopt depaving as part of their climate adaptation strategies. It's time, some say, to start smashing up our concrete streets in a big way – to create spaces better for nature.

...

Her group says it has depaved more than 33,000 sq m (360,000 sq ft) of asphalt in Portland alone since 2008 – an area equivalent to nearly four and a half football pitches.

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...

In Hamilton, flooding can cause sewage to get mixed into runoff that flows into Lake Ontario, the source of the city's drinking water. Green Venture and other local organisations are keen to reduce the chances of that happening, says Casimirri. They view depaving as a key tactic. Certainly, studies have demonstrated that impermeable surfaces in gardens such as concrete increase flood risk in urban areas.

...

Rose says her group's efforts in Portland mean that approximately 24.5 million gallons of rainwater is diverted from entering storm drains each year. In Leuven, Belgium, in 2023 alone, Baptist Vlaeminck, who leads Leuven's Life Pact climate adaptation project, calculates that the removal of 6,800 sq metres (73,000 sq ft) of hard surfacing allowed for the infiltration of an additional 377,000 gallons (1.7 million litres) of water into the ground.

"With climate change, extreme weather rainfall events are going to increase and so [depaving is] not a nice-to-have – it's a necessity," Casimirri adds.

In Europe, at least, some municipalities have begun to treat depaving seriously. Residents of London in the UK are encouraged to depave their gardens, for example.

The city of Leuven in Belgium says it is embracing depaving – or "ontharden" – in a big way. The suburban district of Spaanse Kroon, home to around 550 people, is one of the latest targets of a depaving and renaturing initiative spearheaded by the city.

"We are scaling up now, we are setting up a team dedicated to depaving," says Vlaeminck.

Among the initiatives instigated by Leuven is a "tile taxi" – a small truck that officials will happily send to your home so you can throw in concrete tiles or cobblestones you have removed from your garden. The material is later reused rather than thrown away, says Vlaeminck, who adds that several million

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euros have been set aside by Leuven to fund depaving and renaturing projects such as this.

France, too, is making depaving official, says Gwendoline Grandin, an ecologist with the Île-de-France Regional Agency for Biodiversity. Nationally, the French government has made €500m (\$540m/£430m) available for urban greening – this includes depaving but also installing green walls and roofs, for example. Part of the motivation is to make towns and cities more resilient to summer heatwaves, which have badly affected parts of France in recent years.

An area of 45,000 sq m (480,000 sq ft) has been depaved – formerly a hodgepodge of asphalt, pathways and concrete interlaced with grass. With the hard landscaping now gone, level ground is being reshaped to introduce dips and gullies that catch water, and the whole area will soon be planted over, too.”

(Emphasis supplied)

(A True Copy of the News story, titled, “*The cities stripping out concrete for earth and plants*”, dated: 23.02.2024, published by the BBC, on deconcretization, depaving and desealing in cities in US, Europe, Canada and Australia is annexed herewith and marked as **ANNEXURE O-4**)

27. That the American news website, The Nation, reports vide Article, titled, “*A Cooler Future Means a World With Less Pavement*”, dated: 31.08.2023, that the cities in U.S. are increasingly adopting deconcretization and depaving of surfaces so as to deal with the increasing heat stress and urban flooding, in the wake of climate change.

The relevant texts from the Article are culled out as follows:

“The Depave movement has spread across the United States and Canada in recent years as climate-related extreme heat and flooding have made some cities rethink the wisdom of all that heat-absorbing, impervious surface area.

Depave’s newest chapter is in Chicago, where about half of the population lives in areas where temperatures are at least

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eight degrees higher than the city's base temperature, a disparity that can prove deadly in heat waves. More than 60 percent of the city is covered in impervious surfaces, and when record rains fell in early July, more than 12,000 residents reported flooding in their basements.

"Environmental justice communities are suffering from a lot of pavement-related issues," said Mary Pat McGuire, a professor of architecture at the University of Illinois, and the founder of Depave Chicago. "We're trying to bring attention to it so that the city will start treating this as a critical part of climate adaptation and social justice."

We've had a love affair with paving things for several generations," said Brendan Shane, climate director at the nonprofit Trust for Public Land. "We have too many unnatural paved surfaces and not enough natural surfaces, and that's creating these urban heat islands [and] rapidly flooding neighborhoods.

Extreme heat and flooding are particularly acute in low-income communities of color, which typically have less green space than wealthy, white neighborhoods, a legacy of redlining practices.

Replacing asphalt with greenery has benefits beyond lowering temperatures and reducing flood risk. It's also associated with lower stress levels, a reduction in noise, fewer traffic-related injuries, and even restoration of local biodiversity. It can also improve air quality: Asphalt releases hazardous air pollutants into communities, especially in extreme heat and direct sunlight.

According to the organization's data, replacing asphalt with permeable sport fields, rain gardens, and other porous surfaces has reduced ground temperatures by up to 54 degrees Fahrenheit and captured more than 3.5 million gallons of stormwater, alleviating neighborhood flooding.

..."

(Emphasis supplied)

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(A True Copy of the Article, titled, “*A Cooler Future Means a World With Less Pavement*”, dated: 31.08.2023, published by American news website, The Nation, is annexed herewith and marked as **ANNEXURE O-5**)

28. That deconcretization and depaving of the roadsides, roadberms and open soft areas is the critical need of the hour to allow water infiltration, groundwater recharge, reduce run-off into drains and thereby prevent fresh water wastage, reduce heat islands, control atmospheric heat, make more spaces available for plantations, allow soil Carbon sequestration, preserve urban soil moisture and fertility, enhance aesthetics and combat the devastating impacts of climate change.
29. That an urgent and kind intervention of this Hon’ble Tribunal is sought in light of the facts and circumstances as stated hereinabove.

PRAYER

In light of the facts and circumstances as stated hereinabove, it is, most humbly, prayed this Hon’ble Tribunal may be pleased to:

- A. Issue the directions as sought in the Original Application as also in the Status Report and Brief Submissions, dated: 08.10.2022, as well as the Brief Submissions, dated: 21.02.2024, filed on behalf of the Applicants;
- B. Pass such other or further Order(s) or direction(s) as this Hon’ble Tribunal may deem fit and proper in the facts and circumstances of the present case.

FILED BY:


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Dated:- 07.09.2024

1014

BEFORE THE NATIONAL GREEN TRIBUNAL
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IN THE MATTER OF:

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... APPLICANTS

VERSUS

State of Uttar Pradesh & Ors.

... RESPONDENTS

AFFIDAVIT

I, Vikrant Tongad, S/o Lt. Sh. Baljeet Singh, aged about 32 years, R/o 81, Bhanauta, Greater Noida, Uttar Pradesh - 201311, do hereby solemnly affirm and state as under:

1. That I am the Applicant No.1 in the above titled Original Application and am conversant with the facts and circumstances described in the present case and as such, I am competent to swear this affidavit.
2. That the contents of the accompanying Objection are true and correct and nothing material has been concealed therefrom.

I, IDENTIFIED THE DEPONENT WHO HAS SIGNED IN MY PRESENCE

DEPONENT**VERIFICATION**

Verified on this _____ that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed therefrom.



ATTESTED

NOTARY PUBLIC

DEPONENT

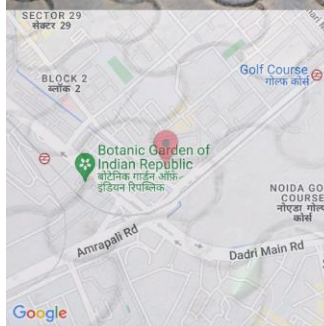
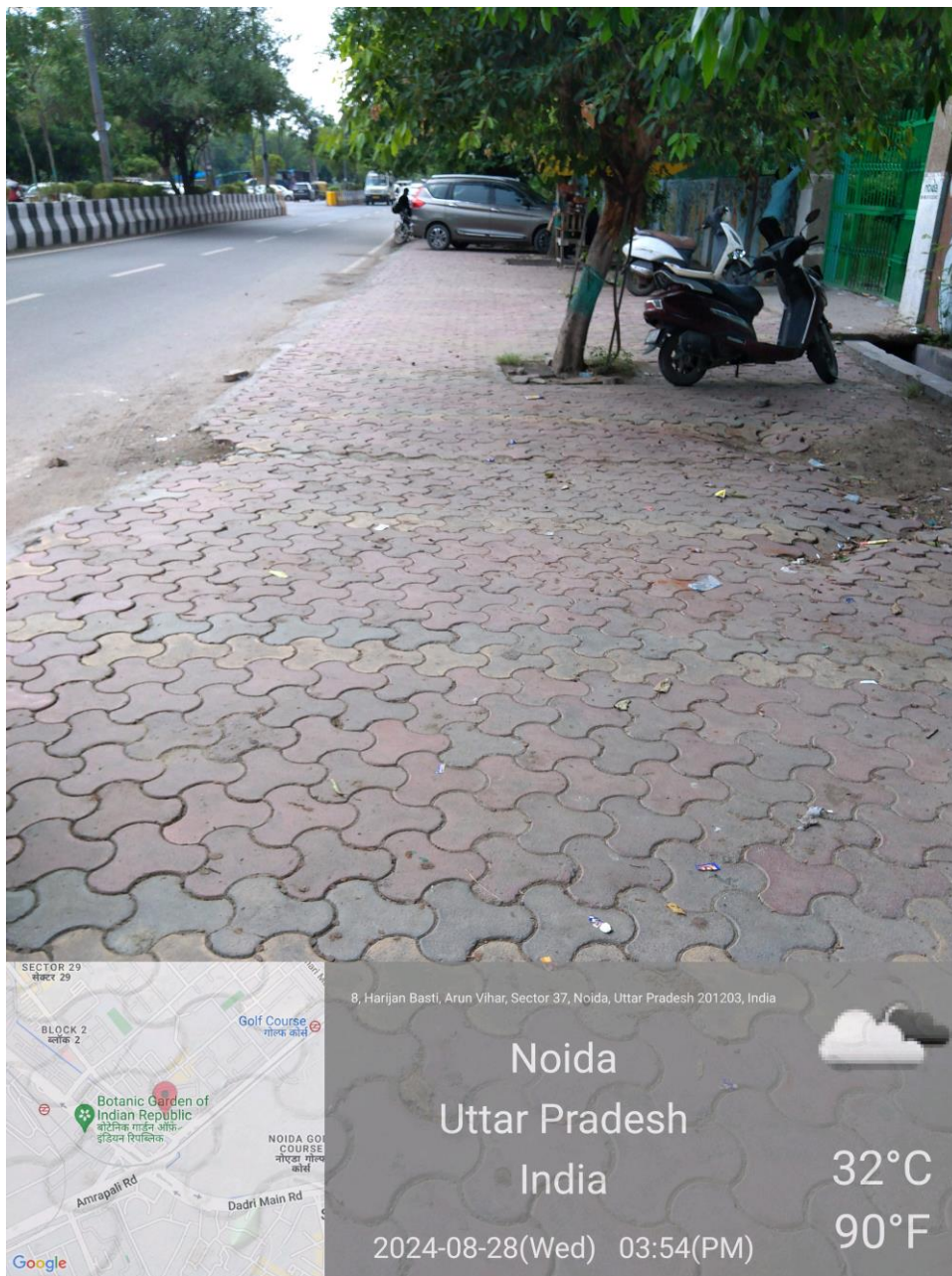
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ANNEXURE O-1

PHOTOGRAPHS FROM NOIDA



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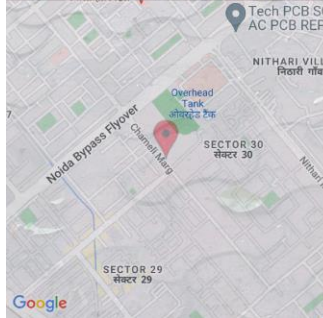
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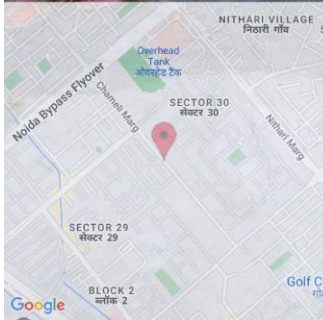


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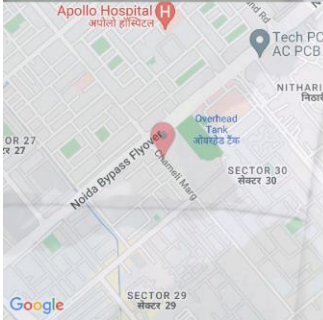
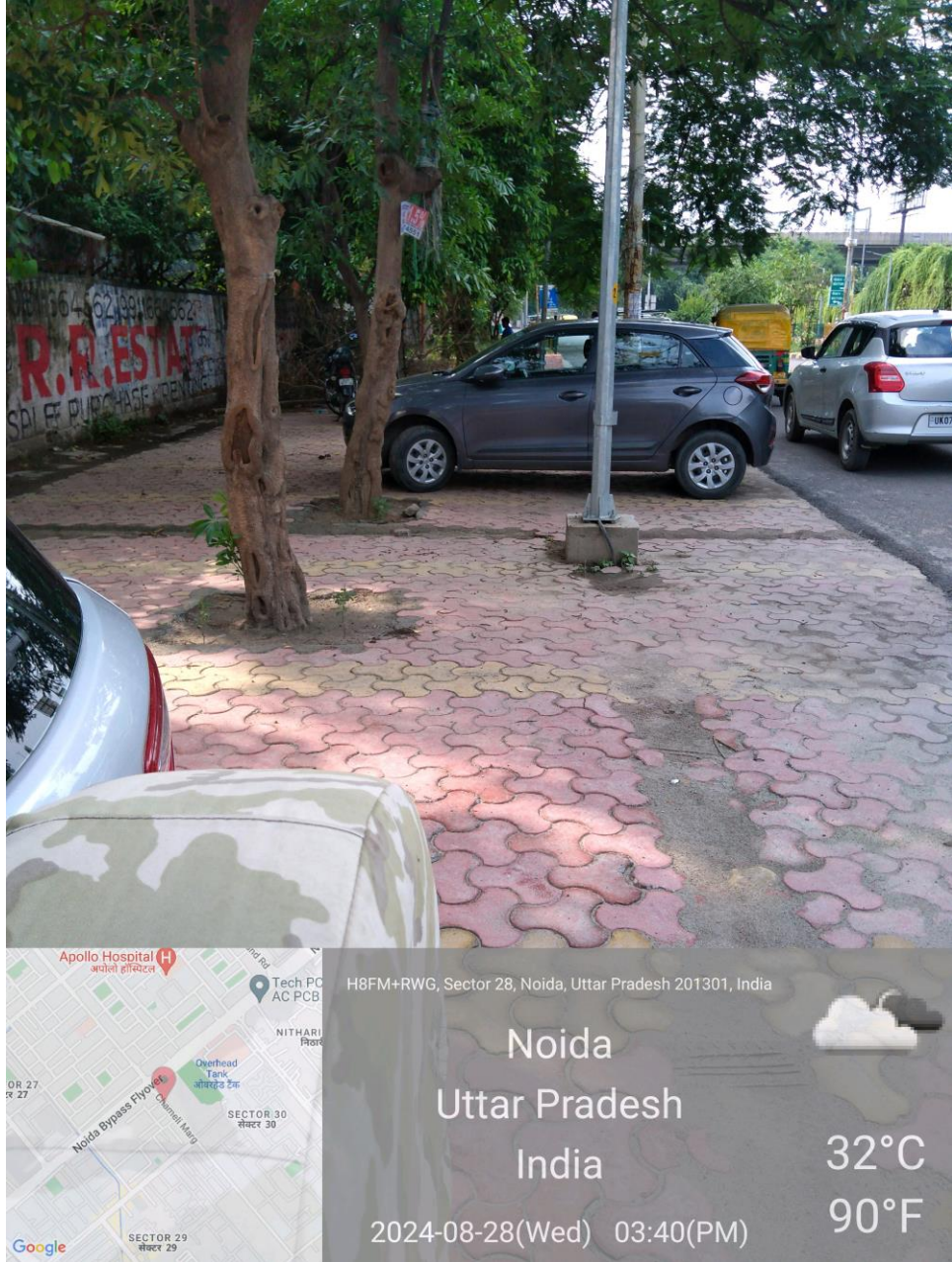
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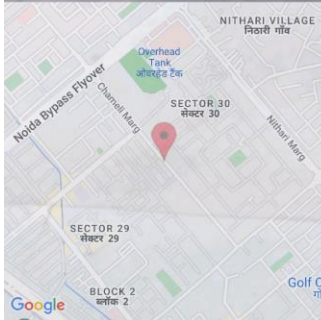
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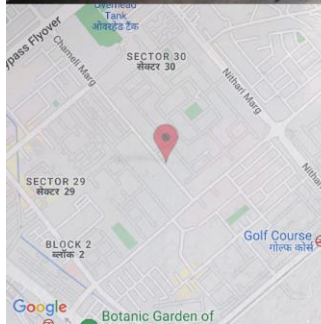
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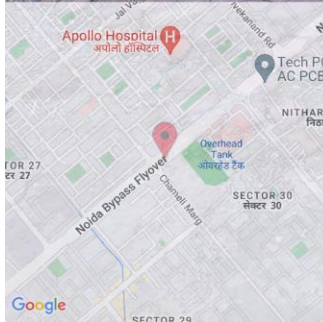
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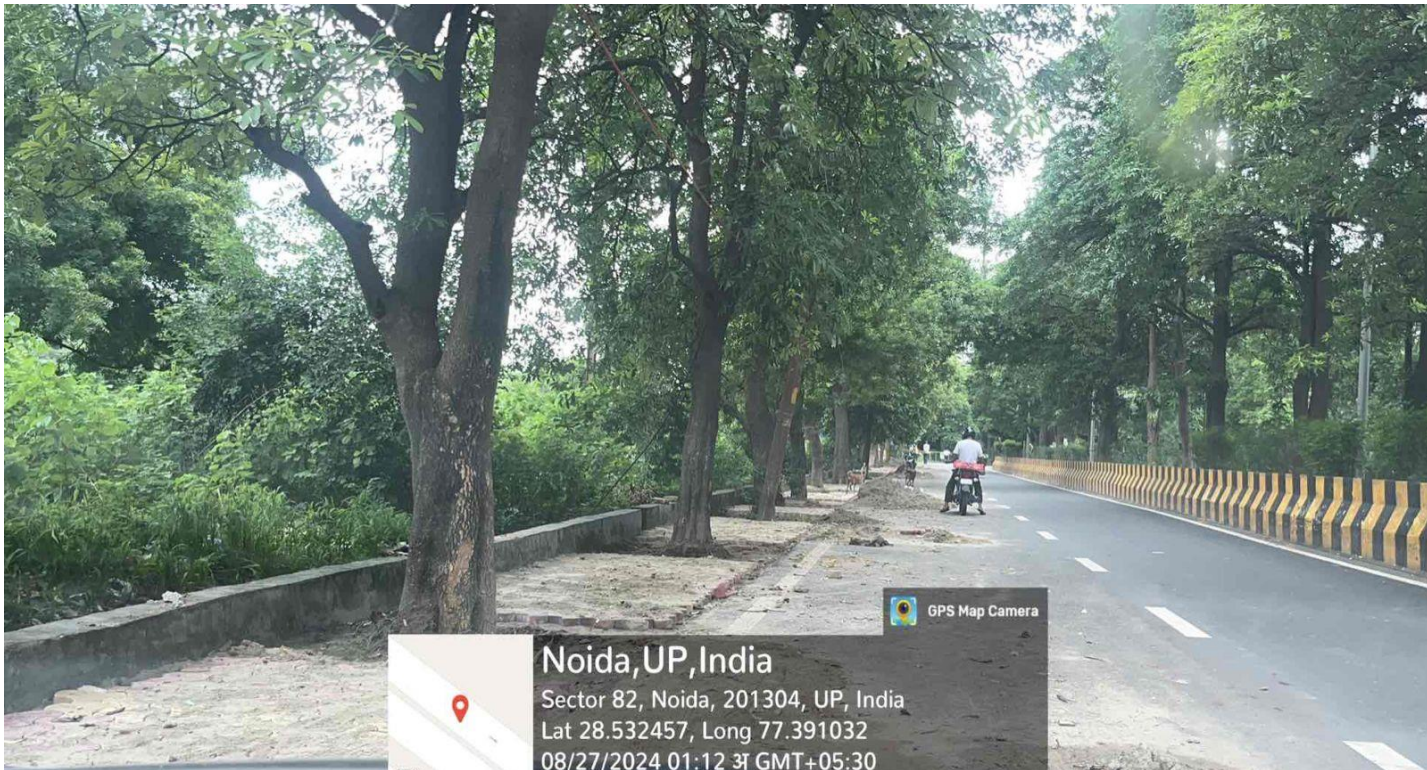
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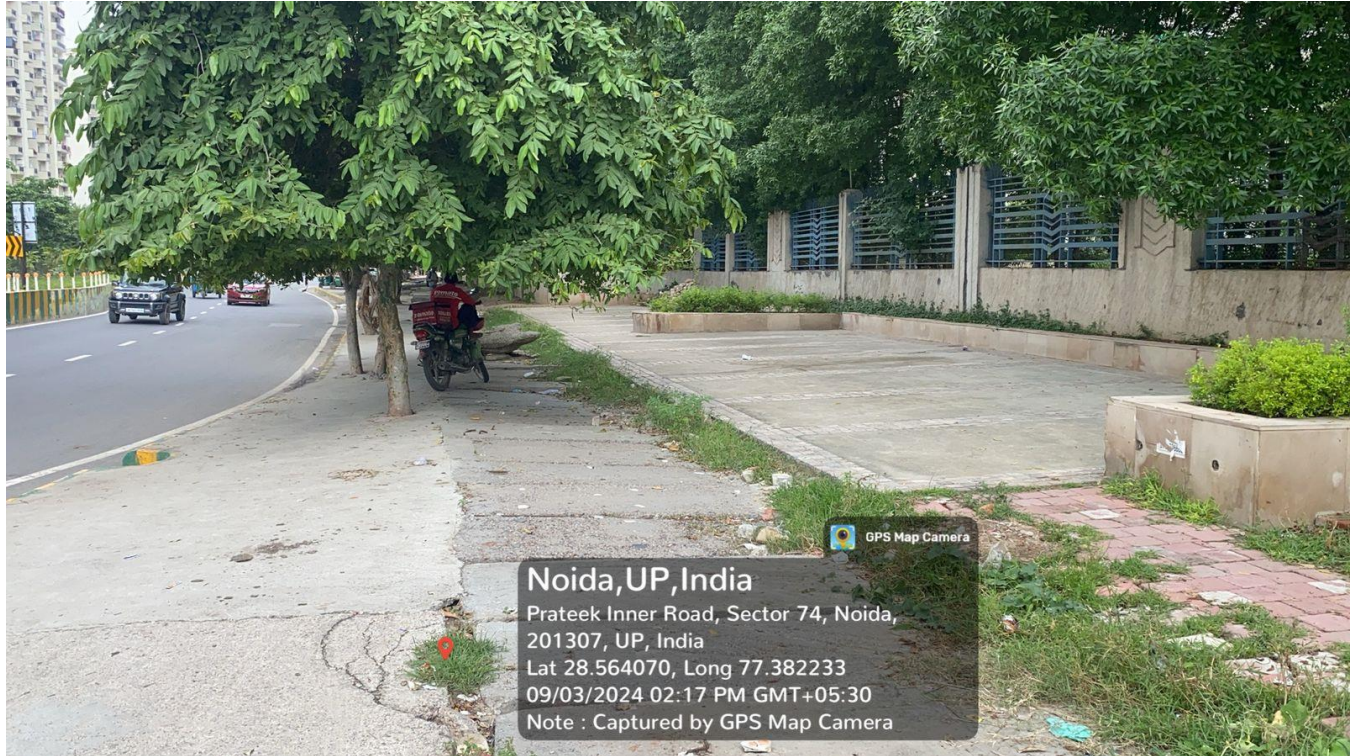
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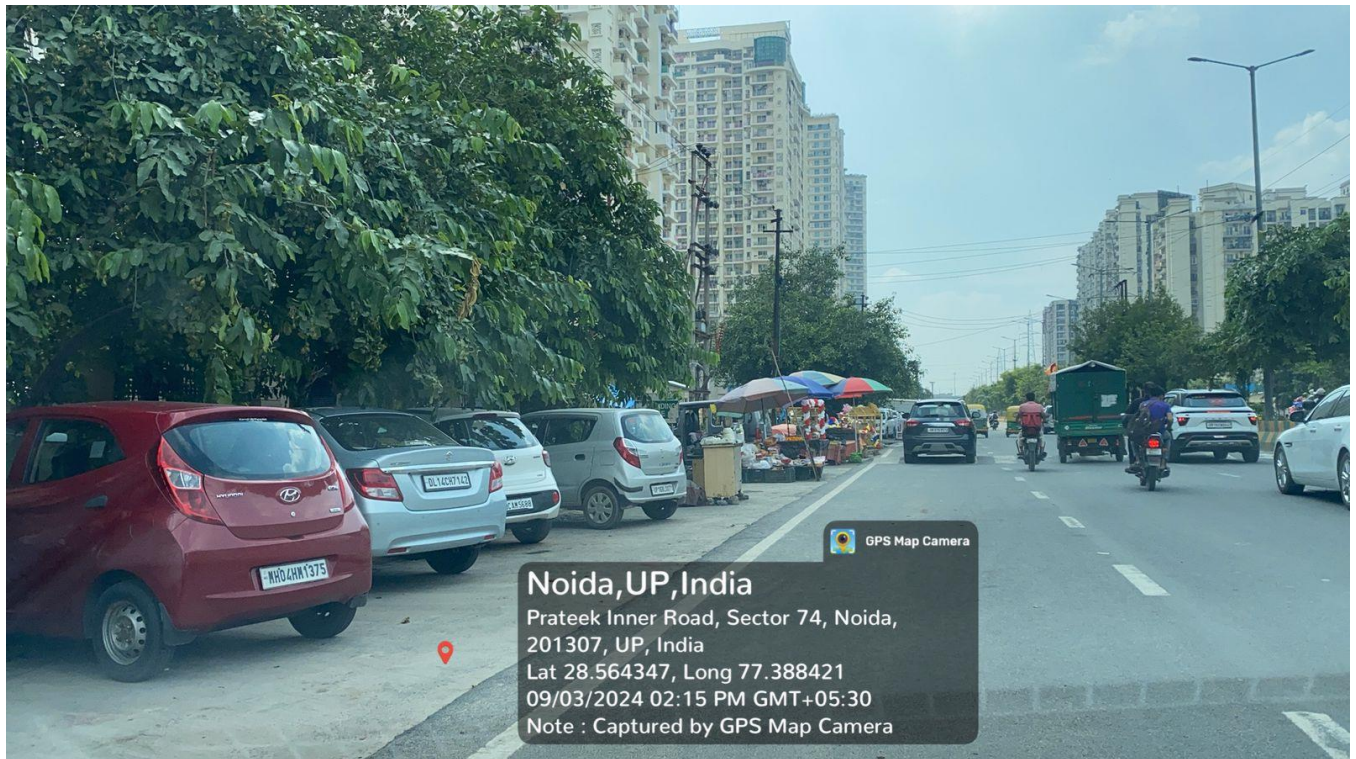
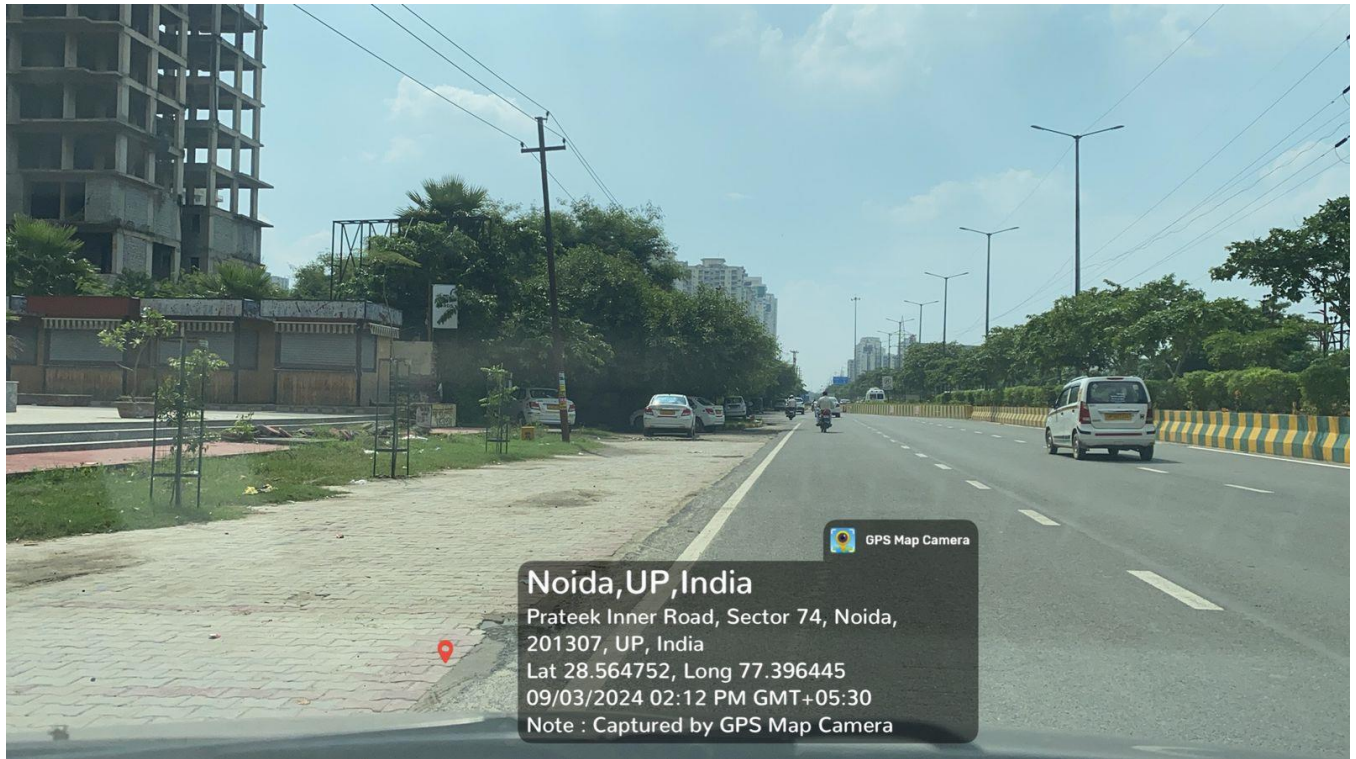
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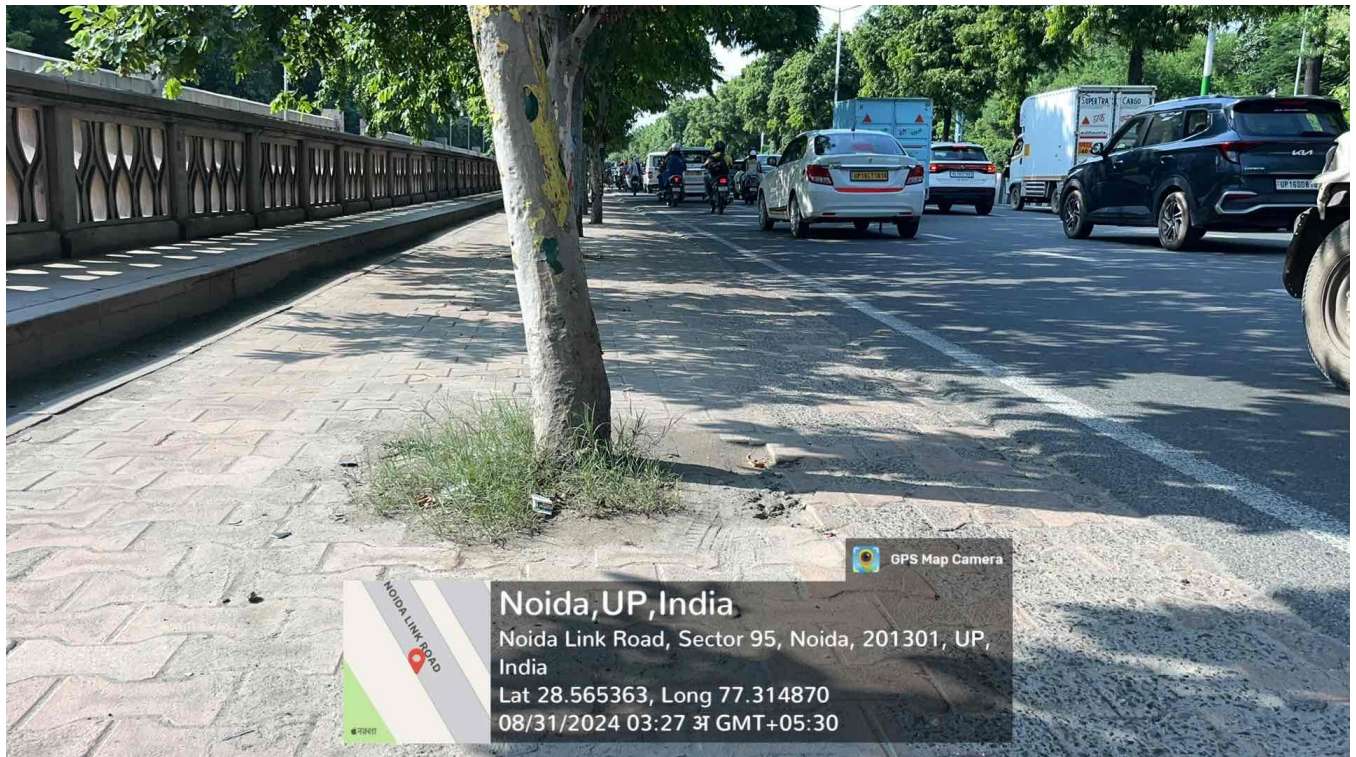
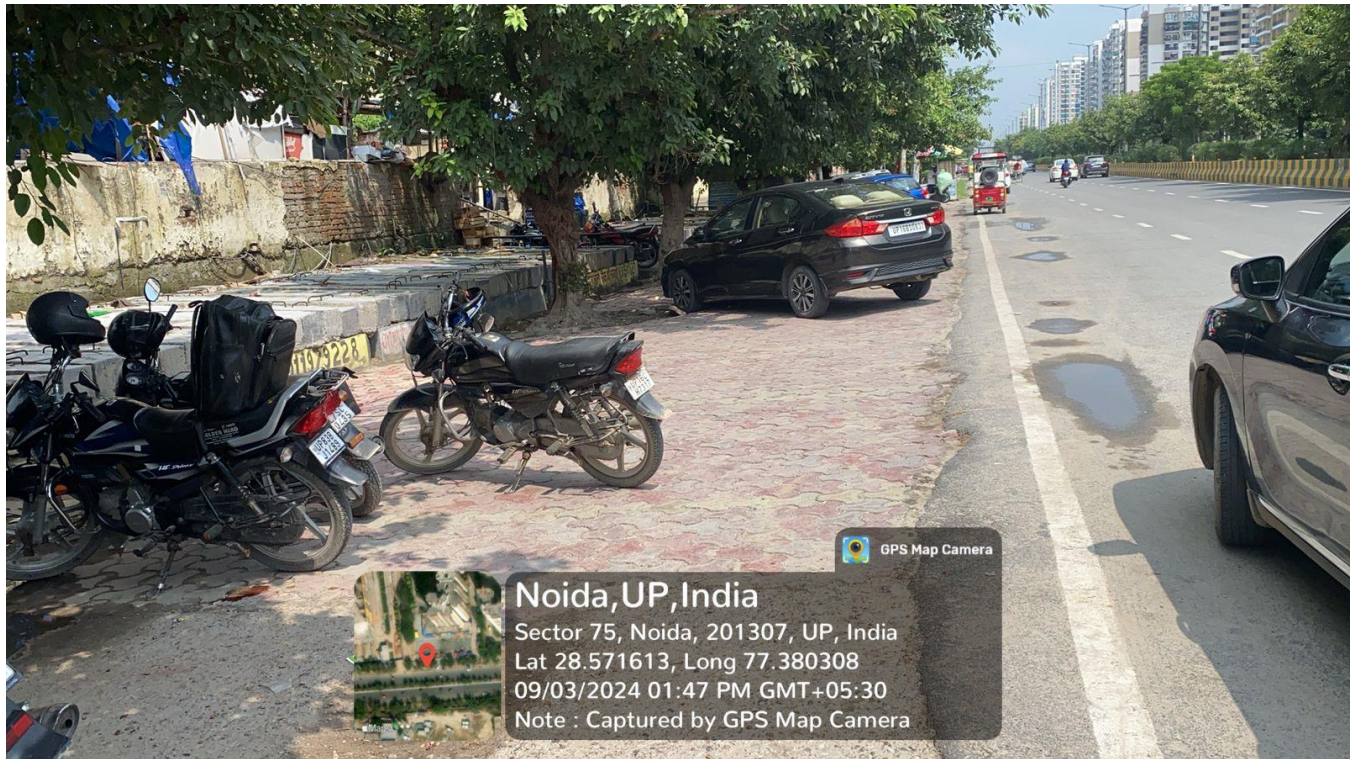
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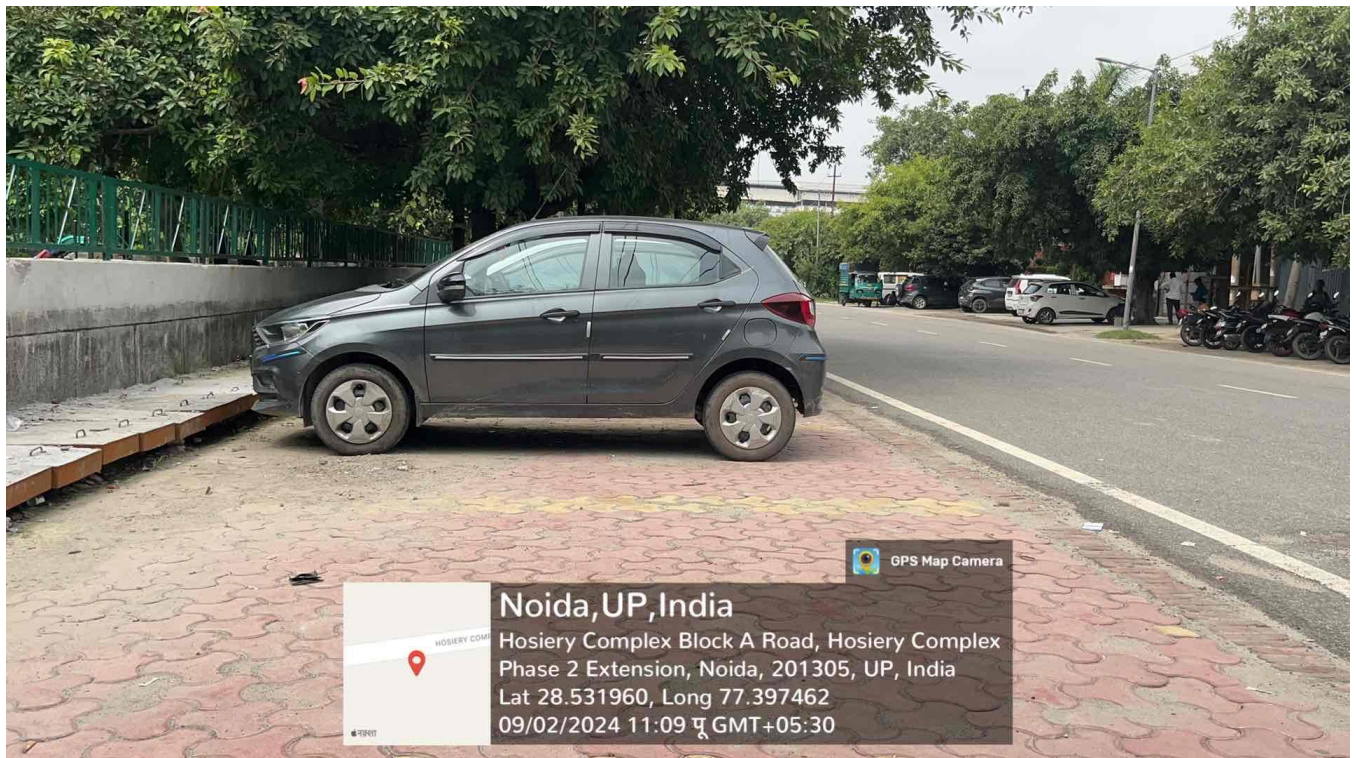
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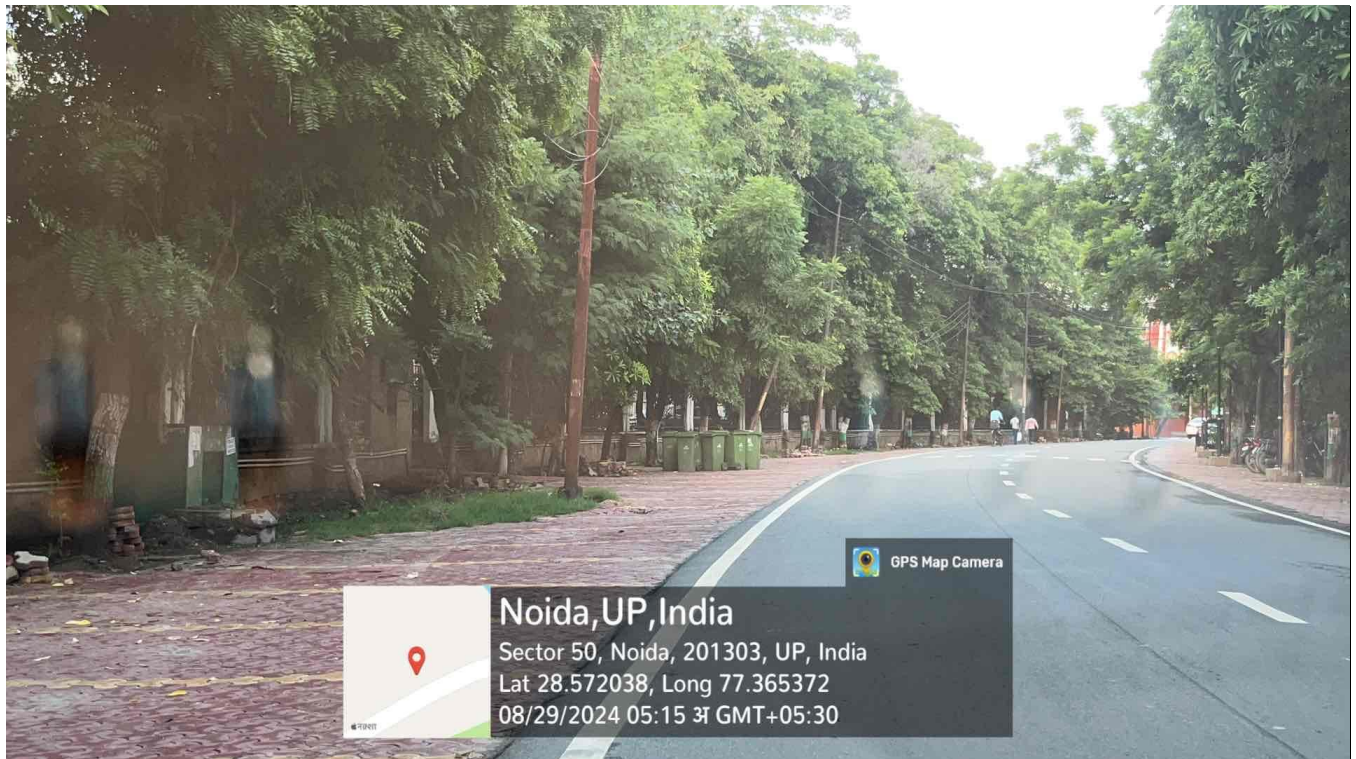
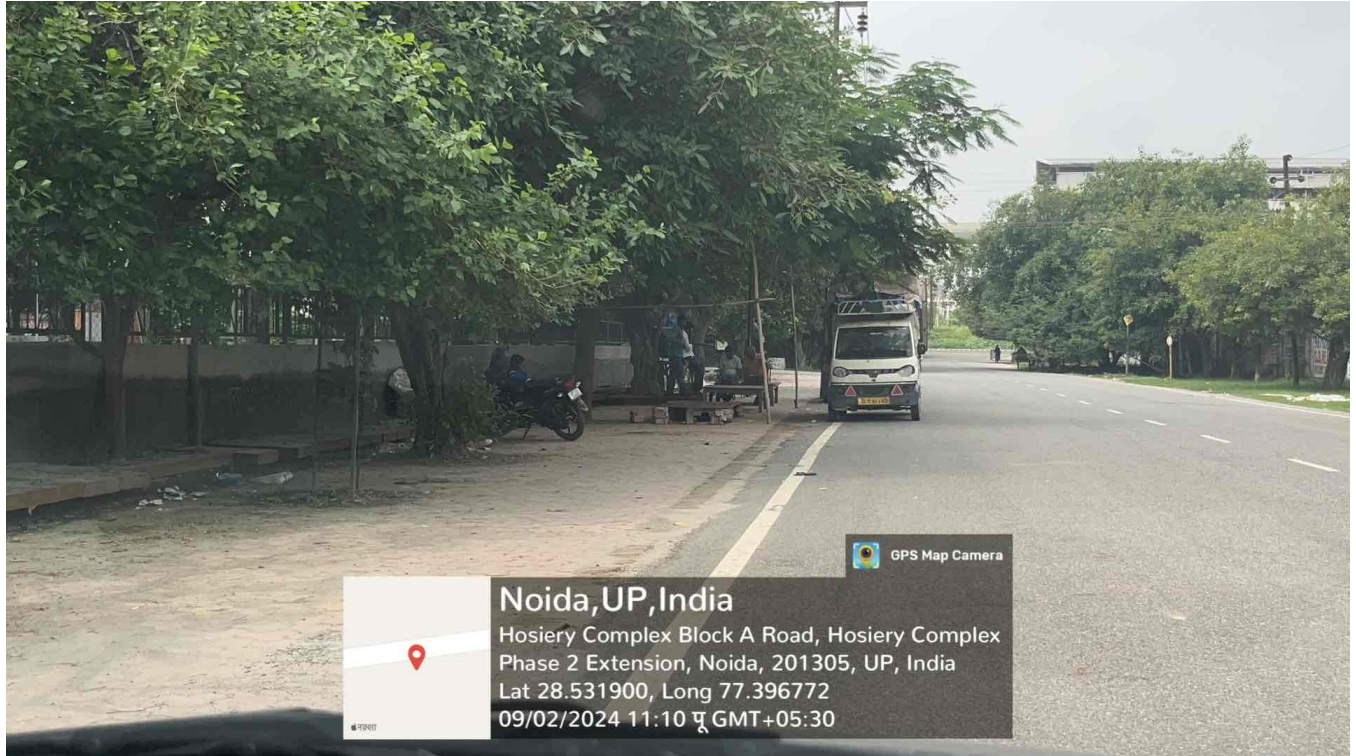
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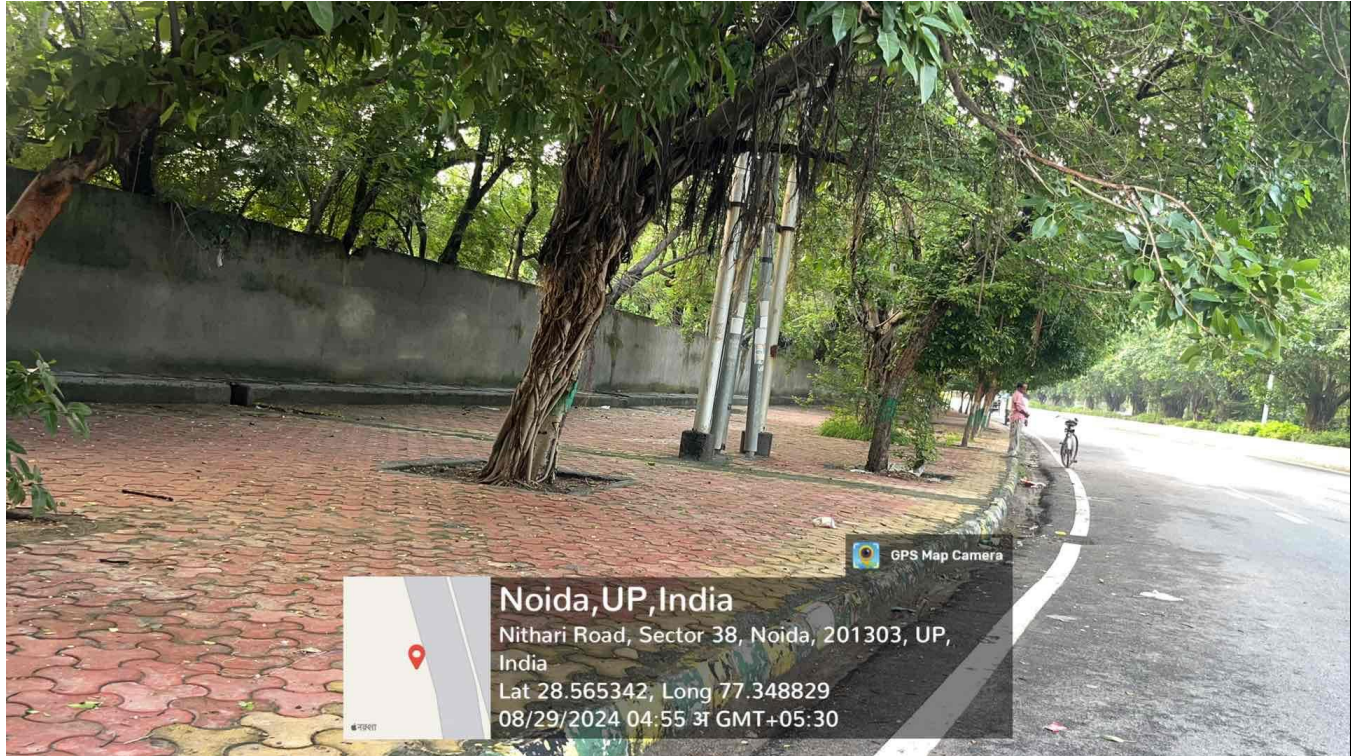


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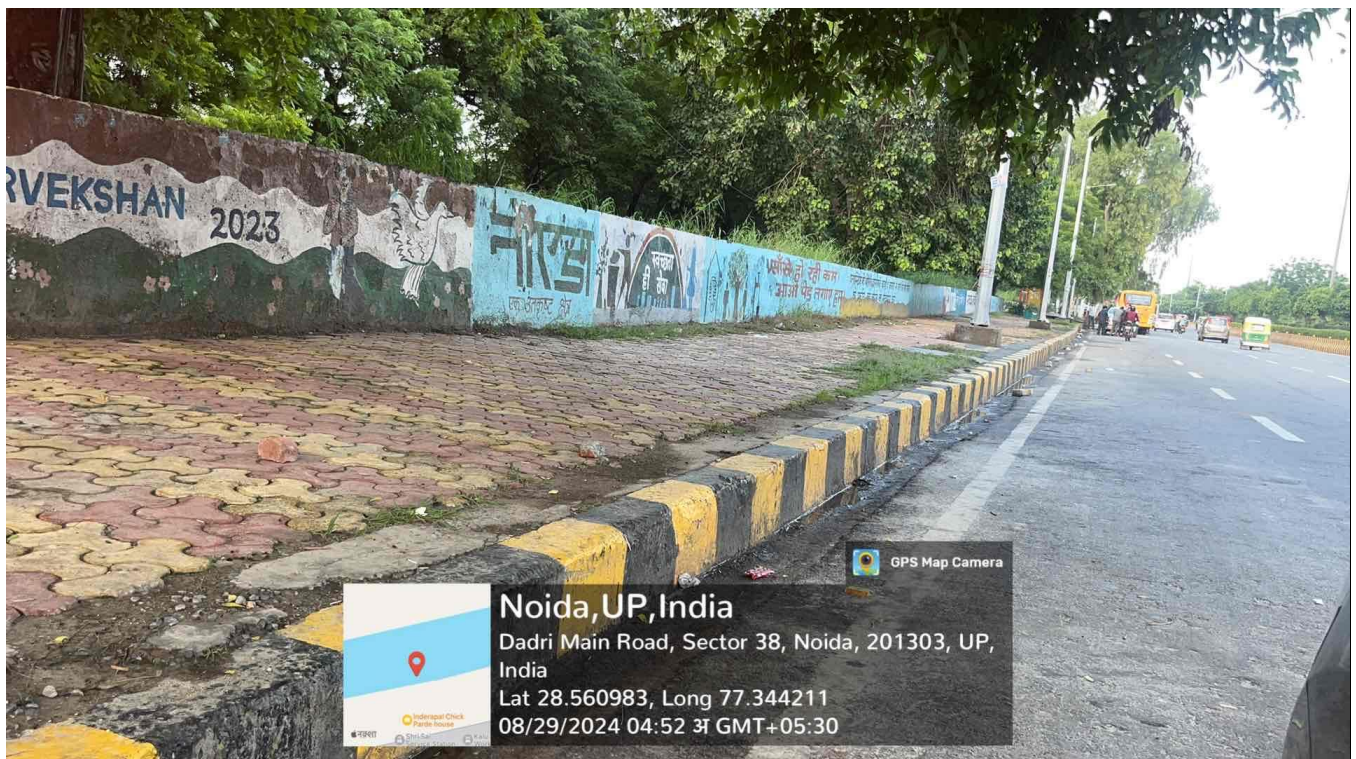
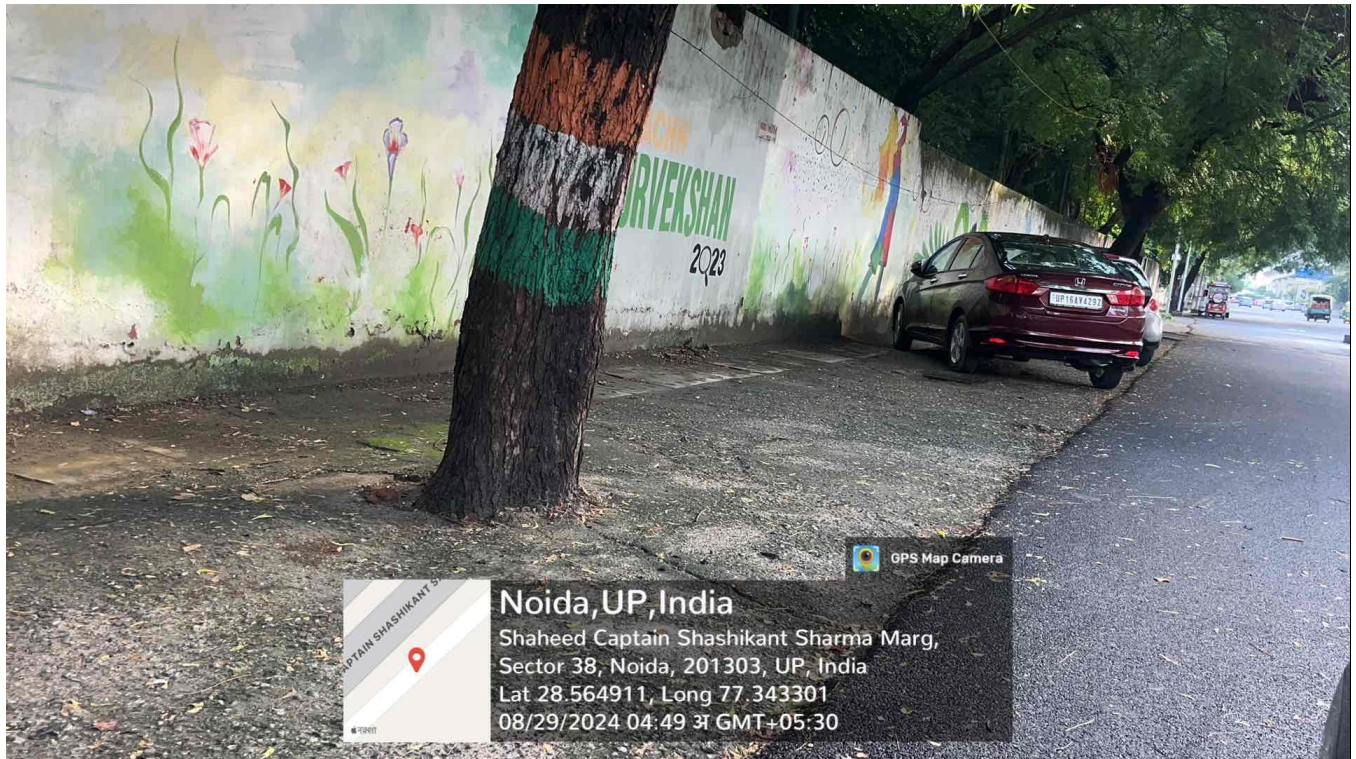


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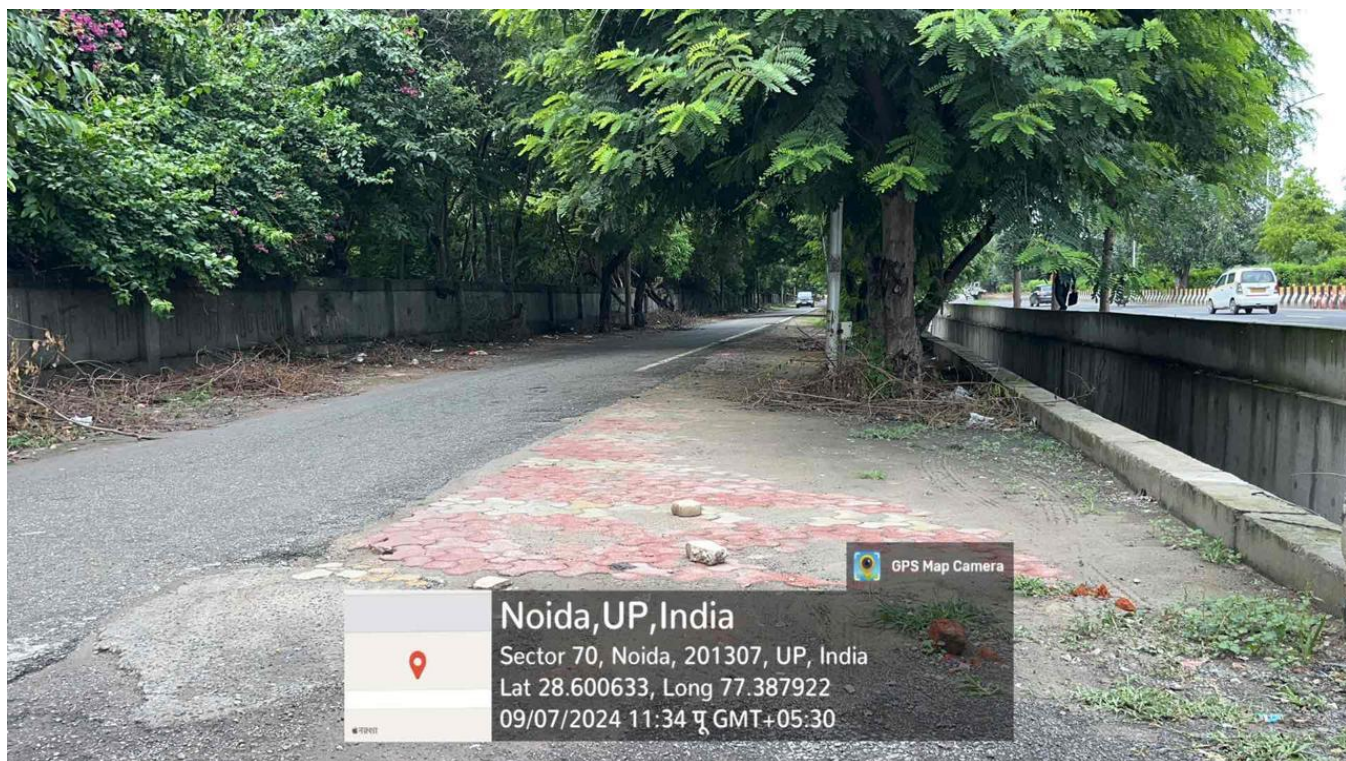
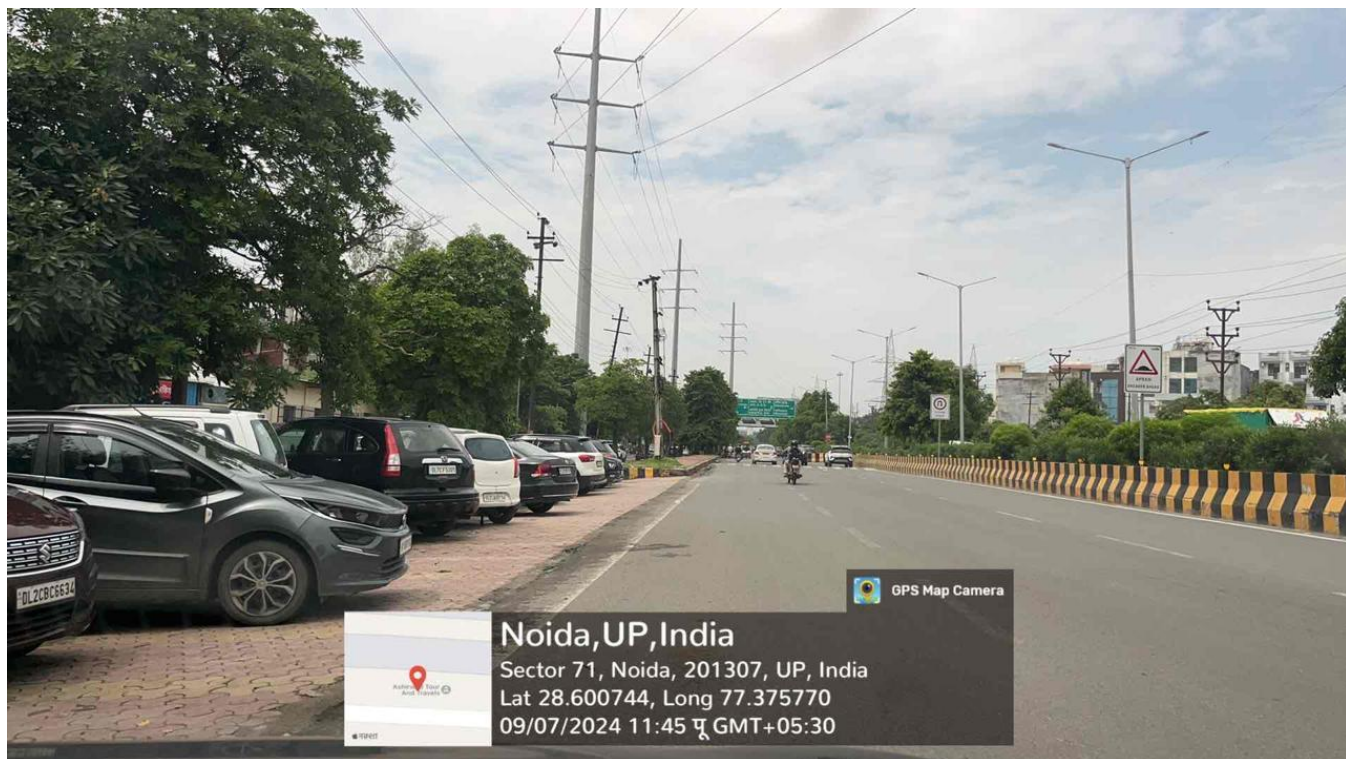
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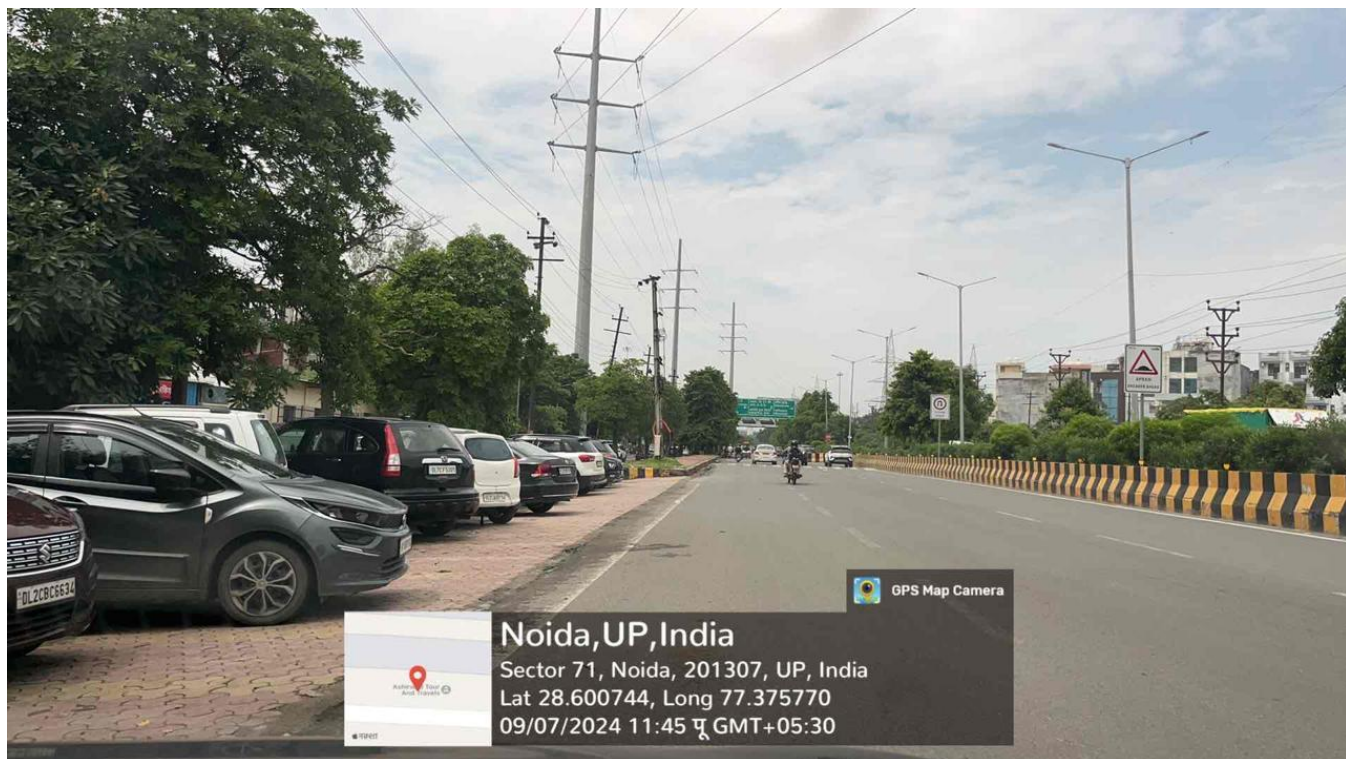
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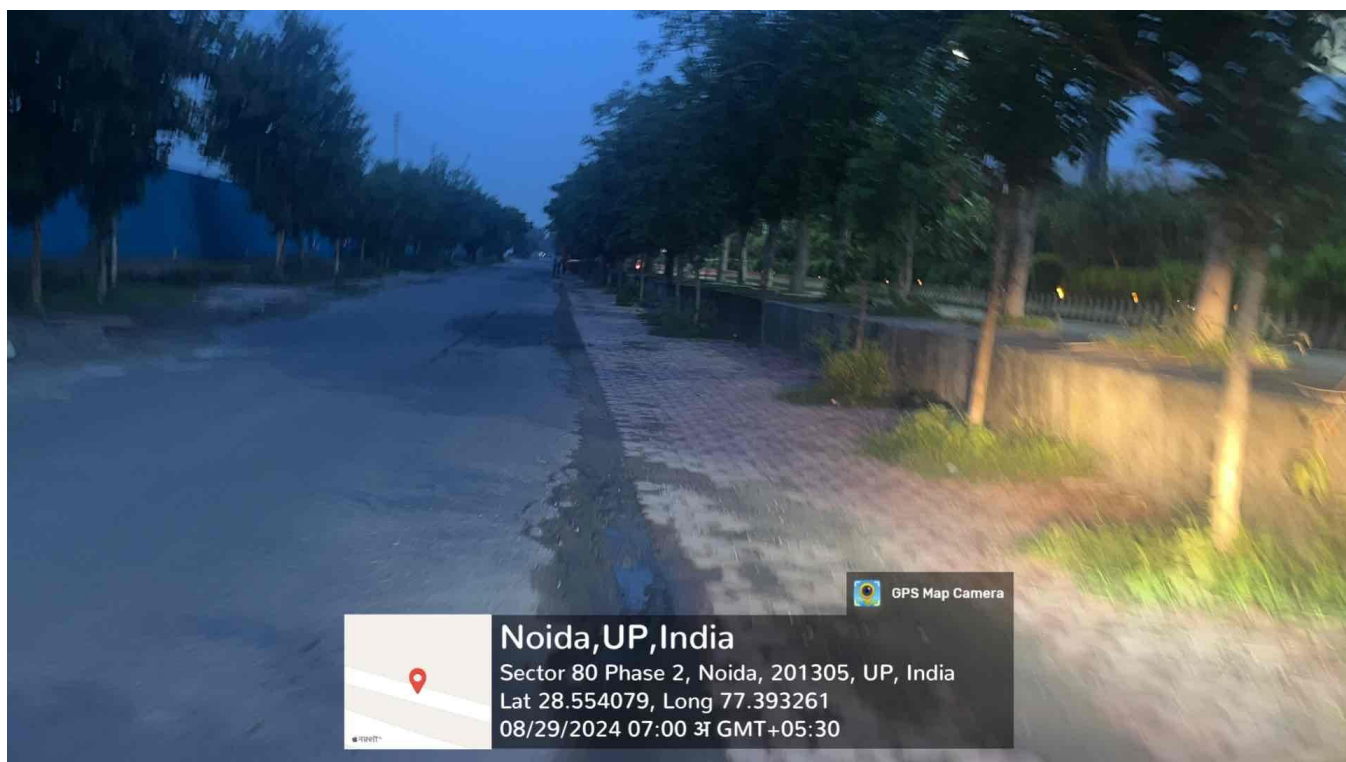
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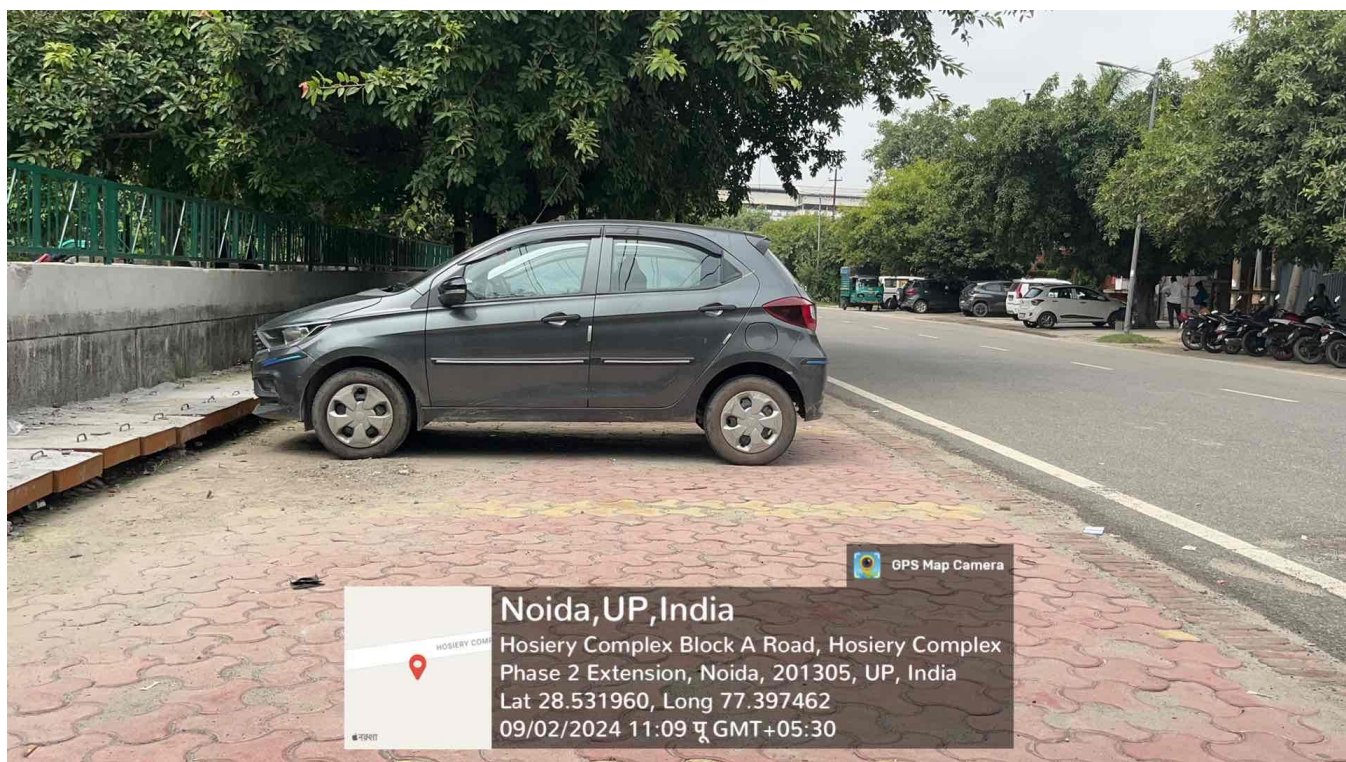
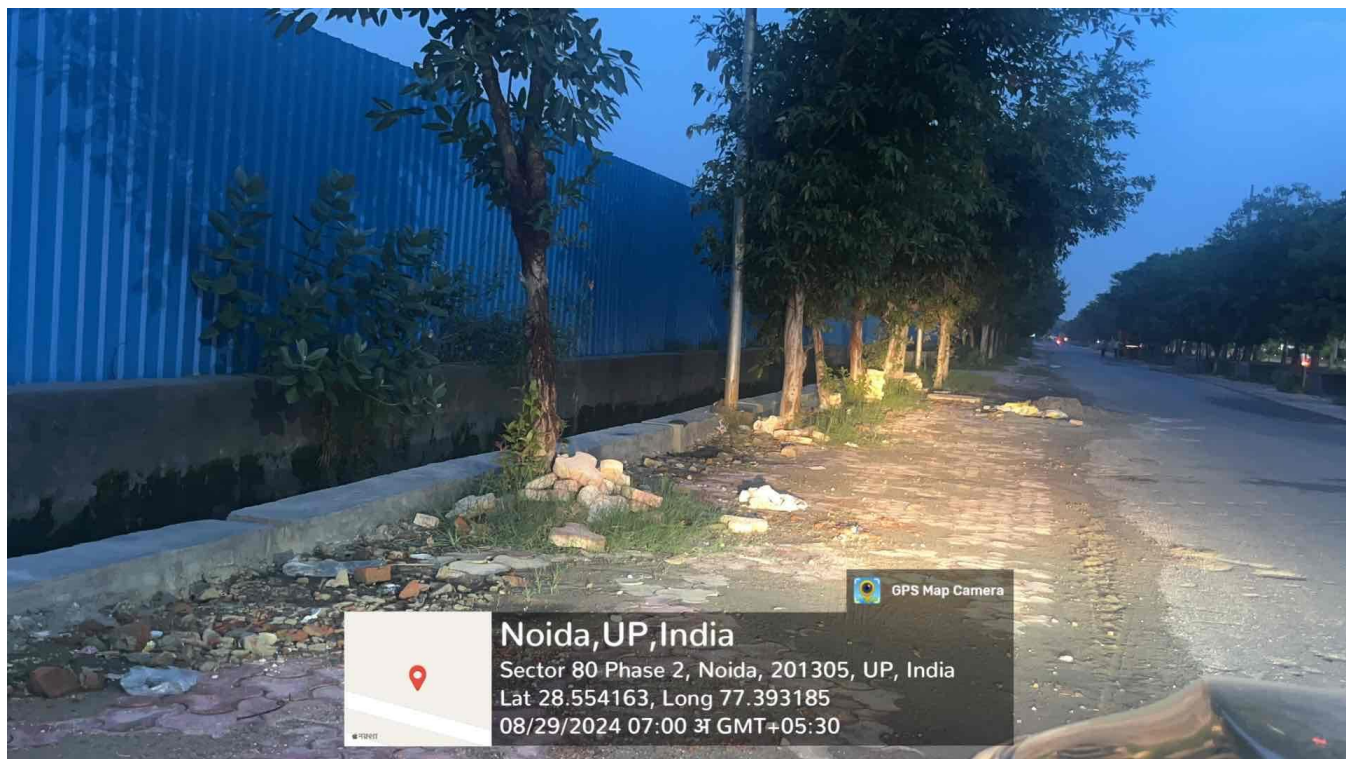
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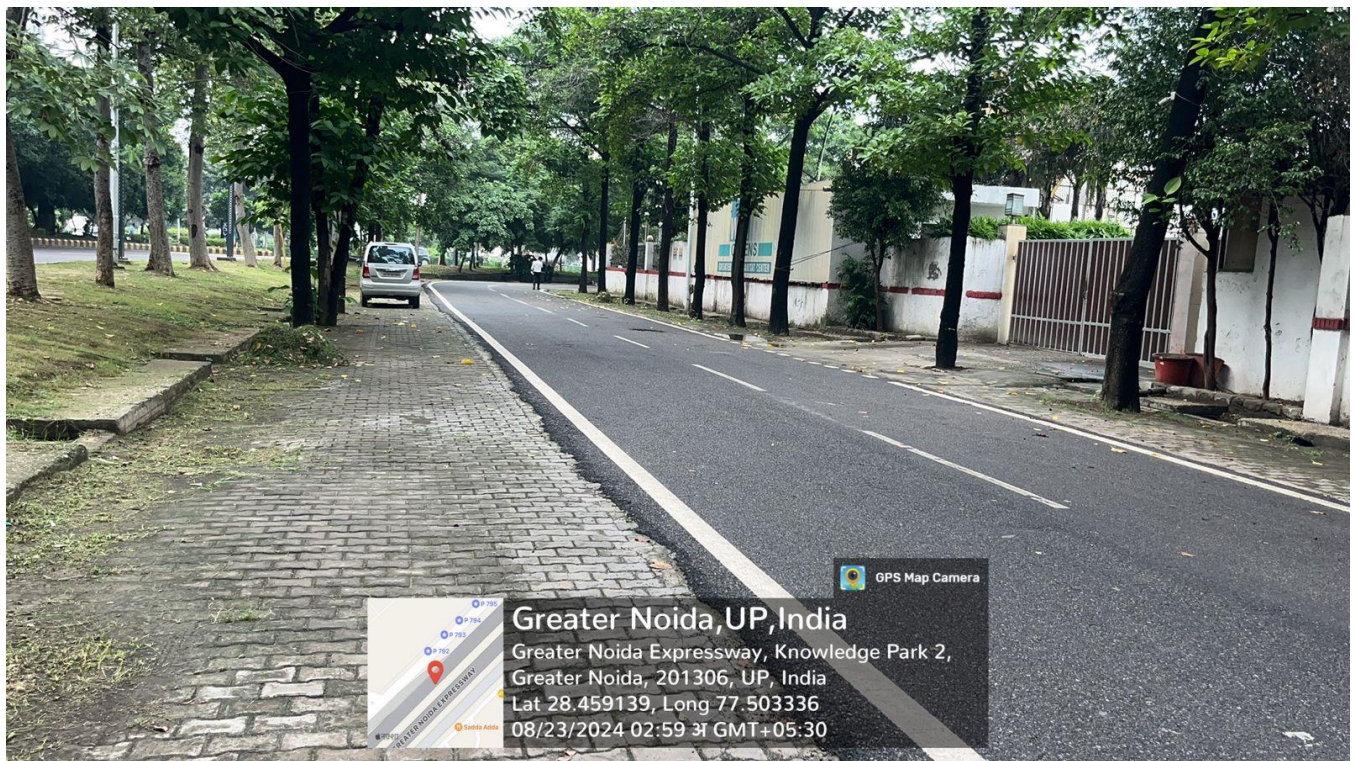
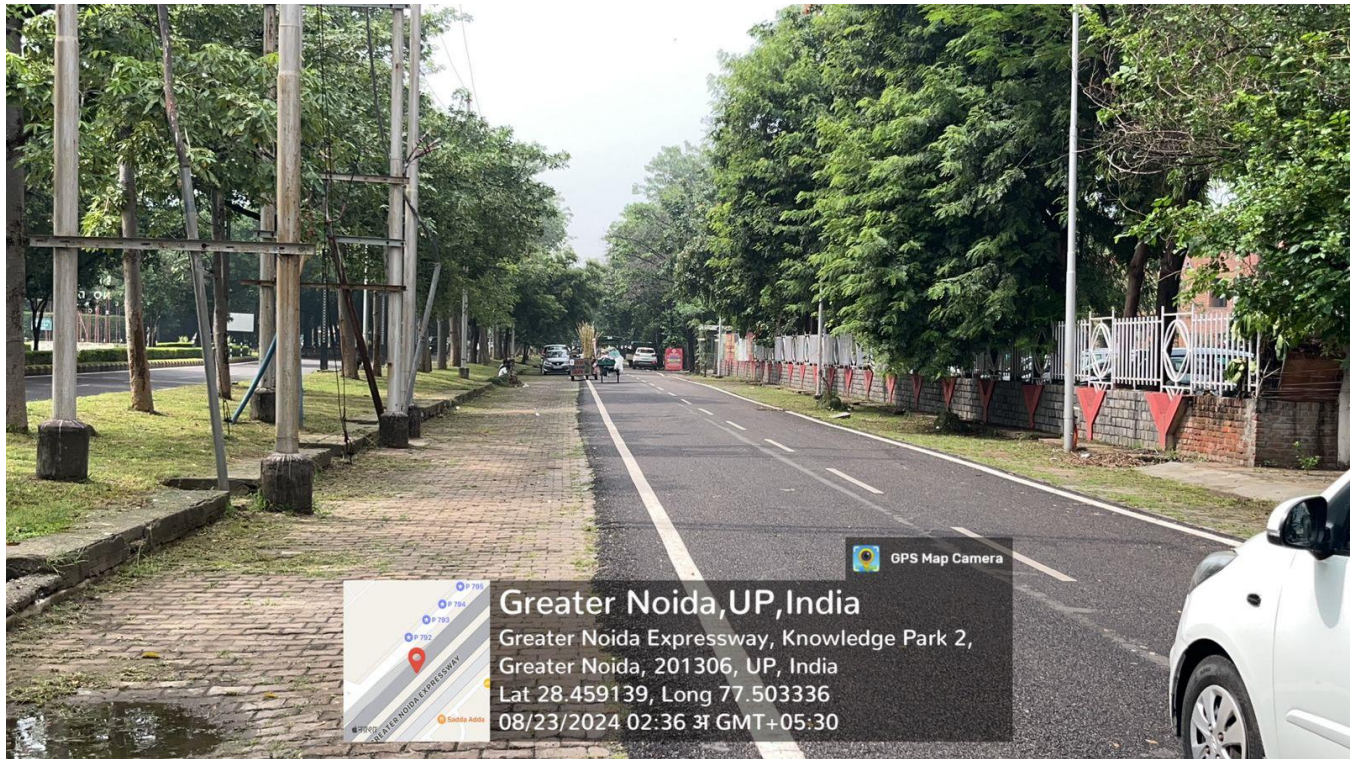


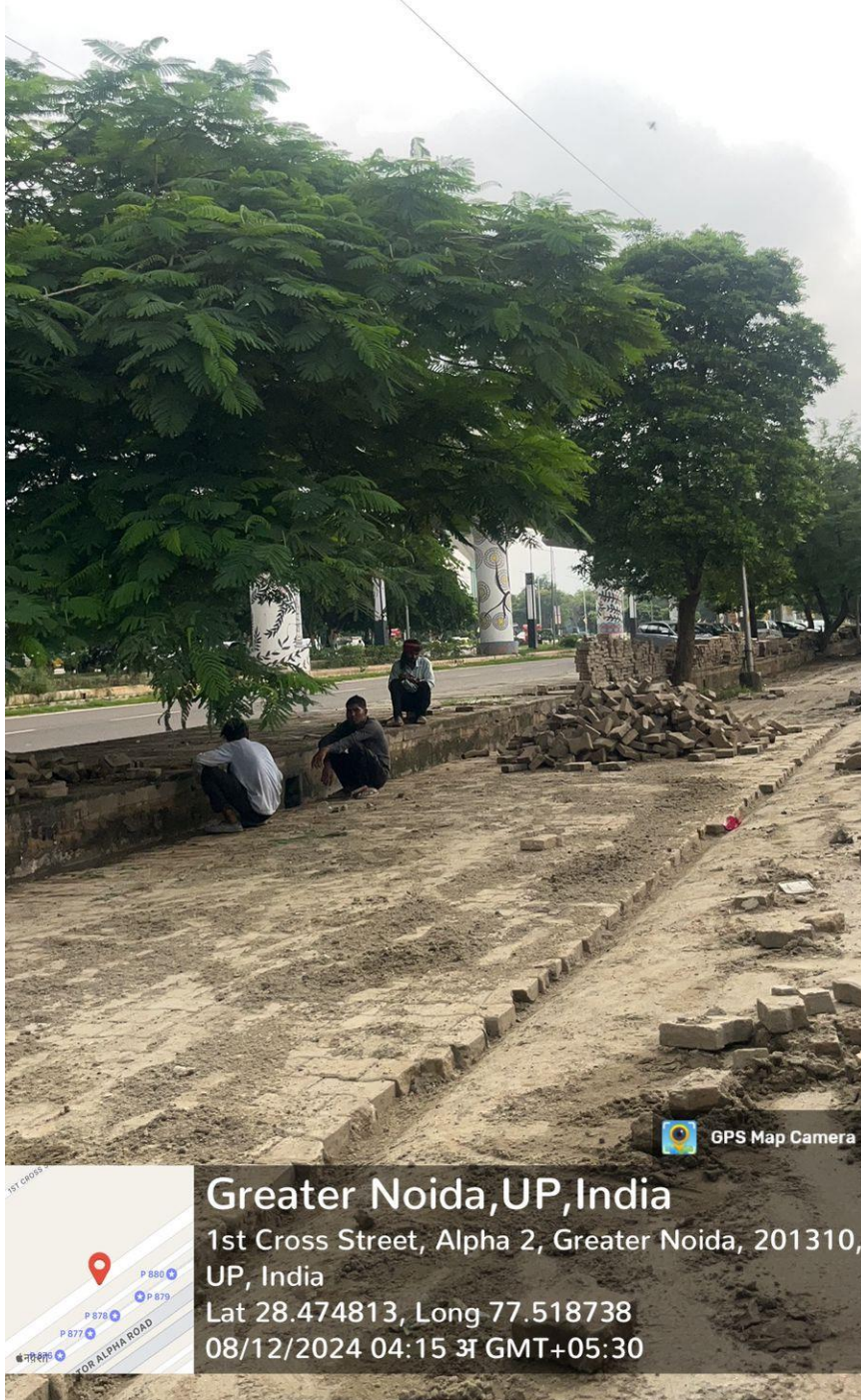
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PHOTOGRAPHS FROM GREATER NOIDA



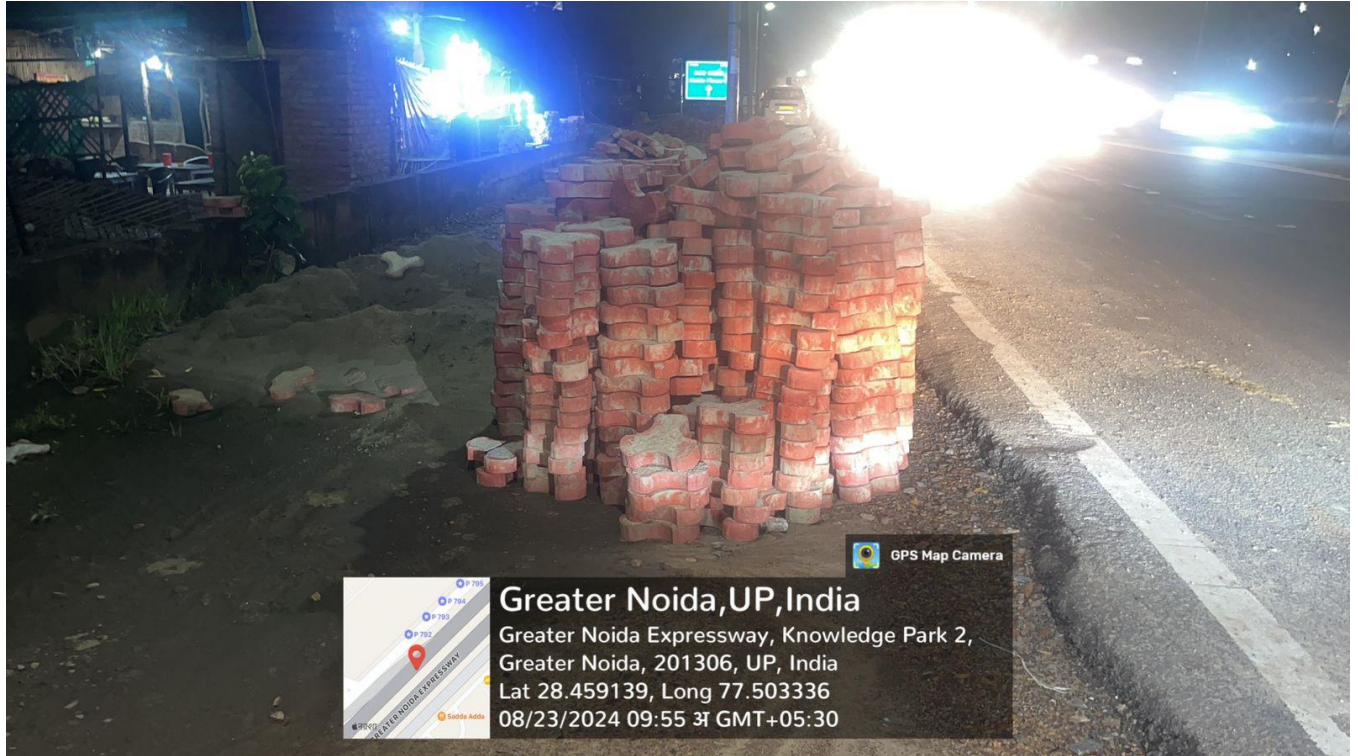


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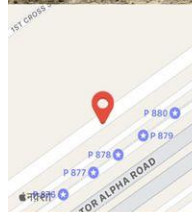
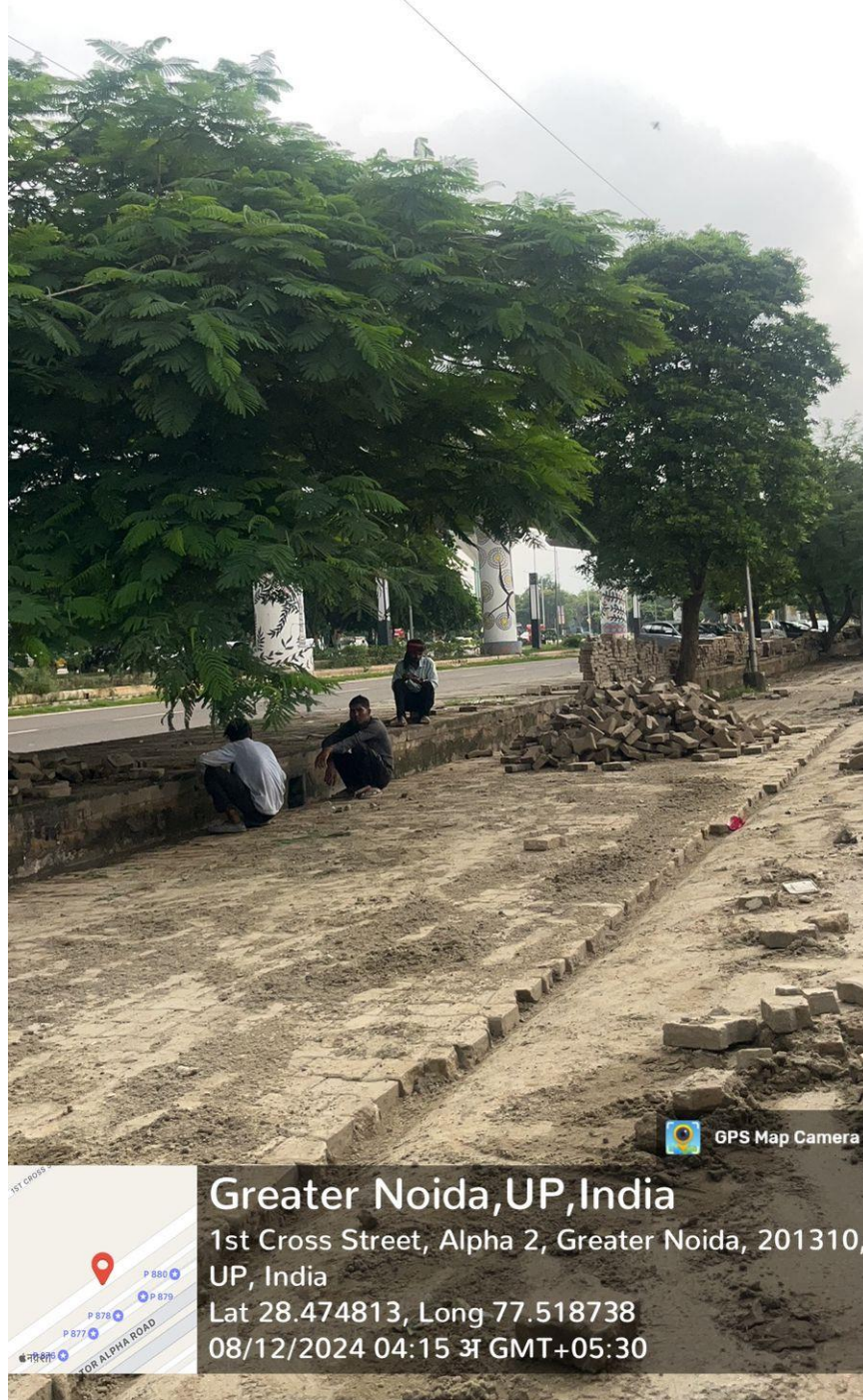


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UP, India
Lat 28.474813, Long 77.518738
08/12/2024 04:15 ॐ GMT+05:30

GPS Map Camera

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SOME GOOD ILLUSTRATIONS OF ROADSIDE VEGETATION AND PRESERVATION









Ghaziabad, Uttar Pradesh, India
101, Block 5, Sector 5, Raj Nagar, Ghaziabad, Uttar Pradesh 201002, India
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Long 77.442903°
25/08/24 04:45 PM GMT +05:30

Item No. 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI****(BY HYBRID MODE)**Original Application No. 175/2022
I.A. No. 621/2023

Vijay Kishor Goswami

Applicant

Versus

State of Uttar Pradesh & Ors.

Respondent(s)

Date of hearing: 17.07.2023

**CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Mr. Rahul Choudhary, Advocate

Respondent: Mr. Ankit Verma, Adv. for the State of UP
Mr. Daleep Dhyani, Adv. for UPPCB
Mr. Yagyawalkya Singh, Adv. for Mathura Vrindavan Nagar Nigam
Mr. Rachit Mittal, Adv. for R - 3**ORDER**

1. The main question raised in this application is 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 Vihar and along Yamuna Parikrama Marg in violation of the orders of this Tribunal in OA No. 165/2013, Akash Vashishtha vs. Union of India and the G.O. dated 23.03.2018 issued by the State of Uttar Pradesh. The following authorities have taken up concretization projects in different parts of Vrindavan as narrated by the applicant:

- i. Mathura – Vrindavan Development Authority – Kailash Nagar.

- ii. Nagar Nigam Mathura-Vrindavan Banke Bihari Colony and parts of Ramanreti (near Maheshwari Seva Sadan and Shyama Shyam Dham);
- iii. Public Works Department – Ramanreti Main road’
- iv. Rural Engineering Services of Uttar Pradesh – near ISKON Gaushala in Ramanreti.

2. It is contended by the learned Counsel appearing for the applicant that concrete is being used beyond the area of roads without leaving any space for kucha area, drains or footpaths. According to the G.O. dated 23.03.2018 of the State of Uttar Pradesh, optimum space has to be left on both sides of the road, specific width of footpaths has to be maintained and footpaths have to be constructed of a certain material. However, the authorities of Vrindavan have committed blatant violation of the G.O. by not following these provisions of the G.O. In addition to that, concretization around roadside trees has taken place without leaving enough space around them, in violation of the Order of the Tribunal (Aditya N. Prasad v. Union of India (OA No. 82 of 2013)) as well as the Hon'ble High Court of Delhi (*Kalpavnksh 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)).

3. The matter was taken up by this Tribunal on 13.07.2022 and a Committee was constituted to submit a factual and action taken report.

4. In compliance thereof, the Joint Committee inspected the area on 18.05.2022 and has submitted report vide email dated 08.07.2022. The relevant part of the report is reproduced here under:-

“ 3. Factual Status Report

Site inspection was conducted by the joint committee ON 18.05.2022 (Annexure-4) in the presence of applicant, Shri Vijay Kishore

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Goswami (The petitioner). Major findings of Site inspection of the inspection committee are as follows:-

- In Chaitanya Vihar, from Bhagwat niwas building to jagat guru kripalu parishad sansthan the road length is about 600 meters. whose width varies from 10 meters to 11 meters. It was found to have been concretized. (photographs annexed).
- In Ramanreti, the road length of about 1.0 km having width as 11 meters from Thakur ji ashram to radha krishna Pathak bageechee was found to have been concretized. (photograph annexed).
- In Ramanreti-Banke Bihari Colony, road length of about 1.0 km having width as 11 meters from nagar nigam park to banke bihari colony was found to have been concretized. (photographs annexed).
- In Kailash nagar, the road length of approx. 2.0 km having width from 10 meters to 12.5 meters from dauji bageechee to sabji mandi was found to have been made with interlocking tiles completely. (photographs annexed).
- Yamuna parikrama marg is about 5.0 km in length is a Darner road (Coal Tar) and footpath has been made with interlocking tiles.

The inspection committee recommended that:-

On the basis of site inspection report, it was observed prima facie that Chaitanya vihar, ramanreti and banke bihari colony roads have been concretized completely. Kailash nagar road is made with interlocking tiles and parikrma marg footpath has been made with interlocking tiles. Hence in context of violation of directions of Hon'ble NGT OA No. 165/2013 Akash vasistha Vs Union of India order dated 05.07.2016 and further Nagar vikas anubhag-5, U P govt. G.O. dated 23.03.2018, notices should be issued to all concerned executive agencies viz. Mathura-Vrindawan Nagar Nigam, Mathura-Vrindawan Development Authority, Public works department and UP Rural Engineering Services, Mathura to get their replies.

Action Taken Report

1) On the basis of the report of site inspection committee dated 18.05.2022, notices were issued to all concerned executive agencies viz. Mathura-Vrindawan Nagar Nigam, Mathura-Vrindawan Development Authority, Public works department and UP Rural Engineering Services, Mathura to get their replies dated 24.05.2022 through designated nodal agency viz. SPCB officer. (Annexure 5).

2) Replies were received from concerned agencies as follows:

- i) Executive Engineer, Rural engineering services, Mathura vide letter dated 16.06.22 (Annexure-5) informed that department has not conducted any work on the above mentioned locations.

ii) Chief Engineer, Mathura-Vrindawan Nagar Nigam vide letter dated 23.06.22 (Annexure-6) informed that Chaitanya vihar & Kailash Nagar colony/areas have been developed by Mathura-Vrindawan development authority, CC and interlocking tiles work was done and was handed over to Nagar Nigam in year 2021. In Banke Bihari colony, road is constructed prior to propagation of G.O., only maintenance of CC roads are being done.

iii) Chief Engineer, Mathura-Vrindawan development authority vide letter dated 28.06.2022 and 01.07.2022 (Annexure-7) has informed that In Kailash nagar, the road length approx, 2.0 km whose width varies from 10 meters to 12.5 meters from dauji bageechee to sabji mandi is made with interlocking tiles completely in year 2014-15. G.S.B. and interlocking tiles have been used for carriage way and footpath. This activity is done prior to the G.O. dated 23.03.2018 and directions will be complied with in future work.

iv) Executive Engineer, Provincial division, Public Works Department, Mathura vide letter dated 28.06.2022 and 30.06.2022 (Annexure-8) has informed that In chaitany vihar and ramanreti, old road is maintained with 15 cm CC work by the department and area around plantation has been kept earthen. On Yamuna parikrama marg, After 2018 no interlocking work is performed on footpath while earthen footpath is developed by braj teerth vikas parishad in place of interlocking tiles. No violation of G.O. is being done on the above two roads.”

5. Notices were also issued to the respondents to file replies.

6. Respondent No. 4 has submitted that the road in Banke Bihari Colony connecting Nagar Nigam Park to Banke Bihari Colony is constructed by the Mathura Vrindavan Nagar Nigam which is of length of about 1.0 km having width as 11 metres and it was constructed prior to enforcement of the G.O. dated 23.03.2018 issued by the Government of Uttar Pradesh.

7. Respondent No. 3, Mathura Vrindavan Development Authority in its reply has submitted that this was done prior to enforcement of the G.O.

8. Learned Counsel appearing for the applicant has argued that the G.O. dated 23.03.2018 also prohibits the use of inter-locking tiles for construction of road side. In compliance of order dated 02.09.2015 passed in OA No. 165/2013, a letter no. 1022 dated 23.03.2018 was issued by the

Joint Secretary, Govt. of Uttar Pradesh which provides the directions as follows:

“1. NATURAL RESIDUE - DEVELOPMENT WORK OF NATURAL RESERVOIRS PONDS AND LAKES IN URBAN AREAS

- (a) *By raising clay revetment around reservoirs, ponds and lakes and then fly ash. brick/straight over burnt bricks/permeable or semi-permeable perforated blocks can be raised/put in maximum width of 2.10 meters only. Cement, concrete, interlocking tiles and black top road will be absolutely prohibited.*
- (b) *For the purpose of using reservoirs, ponds effectively for rain water harvesting, provisions will be made for disposal of drainage of around the area as far as possible in these reservoirs, but **flow/discharge** from the industrial areas be connected Into it after proper treatment only.*

2 MASONRY (PUCCA) CONSTRUCTION IN PARKS

- (a) *For footpaths, only Stabilized Sall/Coarse Sand/Granular Sub Base (G.S.B.) should be used in the given: preference. The purpose of drain, sewage and other infrastructure*

Professor B. Bhattacharya, I.I.T. Delhi with all concerned members expressed their consent on aforementioned proposal.

- 4 *In connection with above, government has taken decision for taking action as under*

1. NATURAL RESIDUE - DEVELOPMENT WORK OF NATURAL RESERVOIRS PONDS AND LAKES IN URBAN AREAS

(a) By raising clay revetment around reservoirs, ponds and lakes and then fly ash. brick/straight over burnt brick / permeable or semipermeable perforated blocks can be raised/put in maximum width of 2.10 meters only. Cement, concrete, interlocking tiles and black top road will be absolutely prohibited.

(b) For the purpose of using reservoirs. ponds effectively. for rain water harvesting. provisions will be made for disposal of drainage of around the area as far as possible in these reservoirs, but flow/discharge from the industrial areas be connected into it after proper treatment only.

2. MASONRY (PUCCA) CONSTRUCTION IN PARKS

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

(b) The total area used for boundary wall, footpath-fountain, works being done by infrastructure like public utility should not exceed more than 5 percent of total area of the concerned park.

3. CORNERS OF ROAD (ROADSIDE)

(a) Except the carnage 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/straight over burnt brick should only be used on 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. Maximum width of footpath can be 1.50 meter only. Remaining portion of roads would be left vacant for the purpose of drain, sewage and other infrastructure facilities.

5. In this connection, I am directed to state that action may please be taken according to decision taken by the Government. If municipal bodies have framed any ode/bylaws in this regard, carrying out amendment may please be taken into consideration accordingly.”

9. Further contention of learned Counsel appearing for the applicant is that:

“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.”

10. The Mathura Vrindavan Development Authority has filed the action taken report dated 08.04.2023 to the effect that Mathura Vrindavan Development Authority has constructed road in Kailash Nagar from Dauji ki Bagiji to Sabji mandi. Along with the Road, the carriage way and the footpath were also constructed with interlocking tiles. Pursuant to the aforesaid direction, MVDA is undertaking the work as per the directions of this Hon'ble Tribunal of de-concretizing at least one meter space around the trees. There are in all 56 trees/plants on the said stretch of road. The removing of the concrete tiles has been undertaken for major part and is still underway, which is likely to be concluded within a couple of days. After removal, the authority has directed the concerned officials to strengthen the uneven/irregular edges. The said work is likely to be concluded within a week.

11. Response of Respondent No. 2, Public Works Department, Mathura is to the effect that in Chaitanya Vihar and Ramanreti old road is maintained with 15 cm cement concrete work which was done by PWD in the old damaged surface. No widening work has been done on the road and the area around plantation has been kept earthen. Further on Yamuna Parikrama Marg, after year 2018, no interlocking work has been carried out on footpath while earthen footpath is developed by the Braj Teerth Vikas Parishad in place of interlocking tiles.

12. Reply submitted by Department of Rural Engineering discloses that no work of concretization or construction has been allotted to the Rural

Engineering Department and no work has been carried out in the areas of Banke Bihar Colony, Raman Reti, Kailsah Nagar and Chaitanya Vihar along with Yamuna Parikrama Marg by the department. Thus, on the basis of above, IA No. 621/2023 has been filed with the prayer that the amount of cost which was imposed vide order dated 02.05.2023 on the department should be waived.

13. In view of above facts, I.A. No. 621/2023 is allowed and amount of penalty is waived.

14. Learned Counsel appearing for the applicant has further pressed directions of this Tribunal dated 23.04.2013 passed in OA No. 82/2013, *Aditya N. Prasad v. Union of India*, guidelines dated 21.07.2000 and Action Plan for Flood Proofing of Cities/Towns dated 03.09.2013 issued by Ministry of Urban Development and letter to the Chief Secretaries of all States dated 23.09.2013 providing guidance for green areas and landscaping. Ministry of Urban Development and Poverty Alleviation Guidelines dated 21.07.2000 states that porous materials to be used, tiling to be done only on pavements which have heavy pedestrian traffic, growth of grasses to be encouraged, excessive pruning to be avoided, compost to be made of leaves, adequate space to be left around trees, digging near trees to be avoided and these precautions to be taken by the departments concerned. When developments are proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities, personnel associated with such developments should recognize that many sacred sites, and areas or places of other cultural significance may have important functions with respect to the conservation and sustainable use of biological diversity and, by extension, the maintenance of the natural resources upon which such communities rely for their well-being.

15. It is further contended that *kucha* areas and soil is an ideal habitat for the cattle and other animals. Conversion of *kucha* area into concretized surfaces leads to the cattle suffering injuries due to excessive heat in summers and excessive cold in winters. These hazardous impacts of concretization can be curbed if concretization is done where necessary and other areas are left *kucha*.

16. The reply submitted by the respondents and the report of the Committee reveals that after issue of Notification by the State of Uttar Pradesh in 2018, no construction has been taken to concretize the area and G.O. is regularly being complied. Non-compliance has not been reported after 2018. However, we direct that the G.O. issued by the State of Uttar Pradesh with regard to concretization and Guidelines issued for Greening of Urban Areas and Landscaping must be complied in letter and spirit.

17. With the above observations and direction, Original Application stands disposed of.

Sheo Kumar Singh, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

July 17, 2023
Original Application No. 175/2022
I.A. No. 621/2023
DV

Item No. 1

(Court No. 2)

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(Through Physical Hearing with Hybrid VC Option)

Original Application No. 378/2022

IN THE MATTER OF:

**Mr. Sahil Garg,
1918, Phase- 10, Mohali-160062, Punjab
Phone: 9888346925**

...Applicant

Versus

1. State of Punjab

Through its Chief Secretary
Punjab Civil Secretariat, Chandigarh
Email: cs@punjab.gov.in

2. Punjab Pollution Control Board

Punjab Zonal Office-1, Vatavaran Bhawan, Nabha Road
Patiala through its Secretary
Email: chairman.ptl.ppcb@punjab.gov.in

3. Mohali Development Authority

Punjab Urban Planning and Development Authority Bhawan
Sector- 62, Sahibzada Ajit Singh Nagar
Punjab-160062
Email: helpdesk@gmada.gov.in/
ca@gmada.gov.in

4. District Magistrate cum deputy Commissioner

SAS Nagar, Mohali, District Administration Complex
Sector-76, SAS Nagar Mohali
Email: dc.mhl@punjab.gov.in

...Respondents

For Applicant:

None for the applicant.

For Respondents:

Er. Gurhsharan Dass Garg, Environmental Engineer Regional Officer,
Mohali on behalf of Member Secretary, PPCB.
Er. Naresh Batta SE,MC, SAS Nagar on behalf of Deputy Commissioner,
SAS NAGAR.

PRESENT:

**HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Judgment Reserved on:- 03.11.2023

Judgment pronounced on:- 30.01.2024

Application is registered based on a letter received by Email.

JUDGMENT

PRONOUNCED BY: HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JM

1. Mr. Sahil Garg resident of H.No. 1918, Phase-10, Mohali has sent by email copy of letter addressed to Ms. Isha Kalia, IAS Deputy Commissioner SAS Nagar District Administrative Complex Sector-76, Mohali and other authorities on public grievance portal of this Tribunal, which has been treated and registered as original application, complaining about concretization of open spaces, on the pretext of parking area requirements, and road-sides, in the name of pedestrian path, right upto the neck of the existing trees and non-implementation of any plantation program for developing green belts in open spaces and along the road-sides.

2. The relevant part of the letter petition enumerating the grievances of the applicant is reproduced as under :-

“Nowadays all we can see is laying down interlocking tiles and concrete in open spaces and we can rarely see a patch of open land. Due to lack of the cleaning department the open spaces are not cleaned for years and they turn into a dumping ground which is not a good sight for the eyes and then after sometime to cover their lack the corporation clears the space overnight to be covered in concrete. The roadsides are covered in concrete right upto the neck of existing trees and even these poor trees might be experiencing difficulty breathing.

Dimensions of all public parks in the city are being reduced unnecessarily and illogically in the name of extra parking. Extra parking is definitely required to accommodate increasing number of vehicles but every site is different and needs to be examined whether reducing the dimensions would even make room for extra parking or not. All Roadsides are being laid with interlocking tiles in the name of pedestrian paths. Do we really need 20 feet wide pedestrian paths?

Here I would like to put up a question, where are we heading? Do we want to convert this city into a concrete prison where no

fresh plantation would take a breath, where there is not an inch of land available for our coming generations to plant a sapling? I understand that as a part of a fast growing nation, development of infrastructure is very important. And the corporation is doing this very beautifully, like recent upgradation of markets, fresh flooring, erection of railings etc. But at the same time the quality of the environment that we live in is also very important. One cannot find even a single plantation program in this development plan of the corporation, just because greenery needs regular maintenance and we don't want to do that, rather cover the city with concrete just for the sake of convenience so that we are free for any maintenance for at least a couple of years. The time is not far when Mohali becomes like any other metro city like a city of concrete. Recently I got a chance to witness the work done by the Chandigarh administration. You might also be aware of their fresh plantations done along the roadsides. Why can't we convert our open public spaces into a green belt rather than laying interlocking tiles? I as a responsible citizen take it as my duty to share ground facts with the administration so that necessary steps could be taken in the interest of all. You are requested to take note of the above and take necessary action at the earliest.”

3. Vide order dated 05.07.2022, this Tribunal constituted a Joint Committee comprising of Principal Secretary, Ministry of Urban Development, Government of Punjab, Principal Chief Conservator of Forests, Government of Punjab, State PCB and Deputy Commissioner, Mohali with direction to submit factual and action taken report within two months which period was extended vide order dated 12.10.2022.
4. In compliance thereof, report of the Joint Committee was filed vide email dated 23.11.2022. The relevant part of the report of the Joint Committee is reproduced below:-

“Subject: Regarding the order of Hon’ble National Green Tribunal Principal Bench passed in O.A No.378 of 2022 titled as Sahil Garg Vs. State of Punjab.

Hon'ble NGT on O.A No. 378 of 2022 titled as Sahil Garg Vs State of Punjab has passed order dated 05.07.2022,whcrein it has directed as under:

- *The grievance in this letter petition sent by Mr. Sahil garg resident of H.No. 1918 Phase-10, Mohali which is treated and registered as original application, is regarding concretization of open spaced, on the pretext of parking area requirement and road sides, in the name of pedestrian path, right upto the neck*

of existing trees and non-implementation of any plantation program for developing green belt in open spaces and along the road side.

• A joint committee comprising of Principal Secretary, Ministry of Urban Development, Govt. of Punjab, Principal Chief Conservator of forests, Govt. of Punjab, State PCB and Deputy Commissioner, Mohali is hereby constituted. The committee shall meet within four weeks, undertake site visits, look into the grievances of the applicant and take requisite action by following due process of law. The joint committee may, besides taking into consideration judgment/directions of Hon'ble Supreme Court and this Tribunal, also consider the following aspects while submitting the factual and action taken report:

- i. Use of perforated tiles permitting percolation of water for boosting ground water.*
- ii. landscaping of open spaces and road side and developing greenbelt along the road side with avenue plantation of native species*
- iii. De-concretization of standing trees with proper space for proper rooting and growth of the tree.*

Further, the Hon'ble National Green Tribunal vide order dated 12.10.2022 has said committee to submit a report within one month. PPCB vide letter no.380 dated 15.11.2022 has constitute a district level committee of following members under the Chairmanship of Additional Deputy Commissioner (UD) SAS Nagar to comply with the NGT orders:-

- Sub-Divisional Magistrate, SAS Nagar*
- Divisional Forest Officer, SAS Nagar*
- Superintending Engineer Municipal Corporation, SAS Nagar*
- Representative of GMADA.*
- Environmental Engineer, PPCB, SAS Nagar*

The petitioner in the complaint it was visited by committee members on dt 17.11.2022 and it informed by Mr. Sahil Garg that the width of the pavement tiles in the city of SAS Nagar should be reduced and the kacha areas and berms should be cleaned, instead of laying tiles on them. The Hon'ble National Green Tribunal has given the following suggestions and the proposal of MC SAS Nagar(Mohali) and GMADA to with the suggestion is as under:

Sr.No	Suggestion	Proposal
1	<i>Use of perforated tiles permitting percolation of water for boosting ground water.</i>	<i>Proposals for installing perforated tiles in place of interlocking tiles will be prepared and sent to the house of Municipal Corporation and GMADA and only perforated tiles will be used in future.</i>

2	landscaping of open spaces and road side and developing greenbelt along the road side with avenue plantation of native species	Under the Government's Nanak Bagichi Scheme, 4000 saplings have been planted in the city in the year 2022-23 in planting season by the Municipal Corporation and GMADA and in the last 3 years about 13000 saplings have been planted and development of green belts will continue in future also.
3	De-concretization of standing trees with proper space for proper rooting and growth of the tree.	As per the guidelines of Hon'ble NGT proper space is kept around the trees and out of 40925 trees in the city about 29006 trees were already de-concretize, out of remaining 11919 trees 4979 trees have been de-concretize and work of deconcretization of remaining 6940 trees is going on at war level. According to which the work of de-concretization of about 80% trees has been completed and the remaining work will be completed within the next one month.

It is to be mentioned here that the Municipal Corporation and GMADA will take the following measures in the future.

- *In place of interlocking tiles, steps will be taken to install perforated tiles.*
- *New saplings will be planted in the city from time to time during the planting season by the Municipal Corporation and GMADA and proper space will be kept around the trees.*
- *Along with this, care will be taken regarding the work of De-concretization and the instructions issued by the Hon'ble NGT from time to time will be strictly followed.”*

5. In view of the averments in the application and observations in the report of the Joint Committee, State of Punjab through Chief Secretary, Government of Punjab, State PCB, Mohali Development Authority and District Magistrate, Mohali were impleaded as respondents No. 1 to 4.

6. Pursuant to service of notice replies have been filed by respondents no. 1, 3 and 4 vide email dated 07.02.2022 and by respondent no. 2 vide email dated 30.12.2022.

7. The relevant part of the reply filed by respondents no. 1, 3 and 4 is reproduced below:-

“Short reply of Aashika Jain, IAS, Deputy Commissioner, Mohali on behalf of Respondent no. 1, 3 & 4.

X X X X

2) That vide order dated 24.11.2022, the Hon'ble Tribunal has desired the response of the State of Punjab through its Chief Secretary, State Pollution Control Board, Mohali Development Authority and District Magistrate, Mohali.

3) That in compliance to the orders dated 24.11.2022, it is respectfully submitted that consequent upon the orders dated 5.7.2022 passed by the Hon'ble National Green Tribunal, the Punjab Pollution Control Board vide letter no. 380 dated 15.11.2022 has constituted a District Level Committee under the Chairmanship of Additional Deputy Commissioner (Urban Development), SAS Nagar (Mohali) comprising of the following officers to comply with the orders of the Hon'ble National Green Tribunal:

- a) Sub Divisional Magistrate, SAS Nagar
- b) Divisional Forest Officer, SAS Nagar
- c) Superintending Engineer, Municipal Corporation, SAS Nagar.
- d) Representation of GMADA.
- e) Environmental Engineer, PPCB, SAS Nagar.

4) That the committee members had met the applicant Ms. Sahil Garg who has given some suggestions to the committee, to which the Municipal Corporation, SAS Nagar has given proposals. The suggestions given by the applicant and the proposals to implement the suggestions of the applicant as given by the Municipal Corporation, SAS Nagar (Mohali) have been incorporated by the committee of officers in their report, which was later on submitted before the Hon'ble National Green Tribunal by the Punjab Pollution Control Board vide email dated 23.11.2022. A copy of the report of the committee of officers is enclosed herewith as Annexure-A for kind perusal of this Hon'ble Tribunal.

5) That the entire facts of the case and the suggestions given by the applicant relates to Municipal Corporation, SAS Nagar and Greater Mohali Area Development Authority (GMADA) and the committee in its report has also requested the Municipal Corporation, SAS Nagar and Greater Mohali Area Development Authority (GMADA) to take the following measures in future.

- a) In place of interlocking tiles, steps will be taken to install perforated tiles.
- b) New saplings will be planted in the city from time to time during the planting season by the Municipal Corporation and GMADA and proper space will be kept around the trees.
- c) Along with this, care will be taken regarding the work of De-concretization and the instructions issued by the Hon'ble National Green Tribunal from time to time will be strictly followed.

6) That MC Mohali has taken following steps on the suggestions of the Joint Committee report:

Sr.No.	Reply sought in para no. 1 of the order dated 24.11.2022 passed by the Hon'ble MGT, New Delhi	Proposal
1	Use of perforated tiles permitting percolation of water for boosting ground water.	Proposals for installing perforated tiles in place of interlocking tiles will be prepared after approval from the Corporation and GMADA only perforated tiles will be used for pavement in future.
2	Landscaping of open spaces and road side and developing greenbelt along the road side with avenue plantation of native species	During the last 3 years about 13000 samplings have been planted and under the Government's Nanak Bagichi Scheme 4000 samplings have been planted in the city along the road side in the year 2022-23 by the Municipal Corporation and GMADA. Green belt along the road side with the avenue plantation of native species shall be developed and continued in future also.
3	De-concretization of standing trees with proper space for proper rooting and growth of the tree.	As per the guidelines of Hon'ble National Green Tribunal proper spaces are kept around the trees and out of 40925 trees in the city about 29006 trees have already been de-concretized. Out of remaining 11919 trees 9500 trees have been de-Concretized and work of de-concretization of remaining 2500 trees is under process. In this way the work of de-concretization of about 94% trees has been completed and the de-concretization of about 6% tree shall be completed within the coming next month.

7) That GMADA has floated tenders for the work of de-concretization around trees on PR7 road on 30.01.2023 and execution work will be started by 20.02.2023.”

8. The relevant part of the reply filed by respondent no. 2 is reproduced below:-

“Short reply of Er. Gursharan Dass Garg, Environmental Engineer, Punjab Pollution Control Board, Regional Office, Mohali on behalf of Punjab Pollution Control Board.

X X X X X

2) That vide order dated 24.11.2022, the Hon'ble Tribunal has desired the response of the State of Punjab through its Chief Secretary, State Pollution Control Board, Mohali Development Authority and District Magistrate, Mohali.

3) That in compliance to the orders dated 24.11.2022, it is respectfully submitted that consequent upon the orders dated 5.7.2022 passed by the Hon'ble National Green Tribunal, the Punjab Pollution Control Board vide letter no. 380 dated 15.11.2022 has constituted a District Level Committee under the Chairmanship of Additional Deputy Commissioner (Urban Development), SAS Nagar (Mohali) comprising of the following officers to comply with the orders of the Hon'ble National Green Tribunal:

- a) Sub Divisional Magistrate, SAS Nagar
- b) Divisional Forest Officer, SAS Nagar
- c) Superintending Engineer, Municipal Corporation, SAS Nagar.
- d) Representation of GMADA.
- e) Environmental Engineer, PPCB, SAS Nagar.

4) That the committee members had met the applicant Ms. Sahil Garg who has given some suggestions to the committee, to which the Municipal Corporation, SAS Nagar has given proposals. The suggestions given by the applicant and the proposals to implement the suggestions of the applicant as given by the Municipal Corporation, SAS Nagar (Mohali) have been incorporated by the committee of officers in their report, which was later on submitted before the Hon'ble National Green Tribunal by the Punjab Pollution Control Board vide email dated 23.11.2022. A copy of the report of the committee of officers is enclosed herewith as Annexure-A for kind perusal of this Hon'ble Tribunal.

5) That the entire facts of the case and the suggestions given by the applicant relates to Municipal Corporation, SAS Nagar and Greater Mohali Area Development Authority (GMADA) and the committee in its report has also requested the Municipal Corporation, SAS Nagar and Greater Mohali Area Development Authority (GMADA) to take the following measures in future.

- a) In place of interlocking tiles, steps will be taken to install perforated tiles.
- b) New saplings will be planted in the city from time to time during the planting season by the Municipal Corporation and GMADA and proper space will be kept around the trees.

c) Along with this, care will be taken regarding the work of De-concretization and the instructions issued by the Hon'ble National Green Tribunal from time to time will be strictly followed.

6) That it is pertinent to mention here that the Chief Secretary to Government of Punjab and the State Pollution Control Board have only been impleaded as performa parties, whereas, the actual work on the suggestions given by the applicant and the future measures as suggested by the committee of officers in its report are to be implemented by the Municipal Corporation, SAS Nagar and Greater Mohali Area Development Authority (GMADA).

7) That the short reply of the Punjab Pollution Control Board may kindly be allowed to be placed on record in compliance to order dated 24.11.2022 of the Hon'ble National Green Tribunal for kind consideration and appropriate orders.”

9. Er. Gurhsharan Dass Garg, Environmental Engineer RO, Mohali on behalf of MS, PPCB and Er. Naresh Batta SE,MC, SAS Nagar appeared on behalf of Deputy Commissioner, SAS NAGAR before this Tribunal on 03.11.2023 and we interacted with them and in the course of interaction they assured due compliance with the directions regarding de-concretization of trees. In view of the nature of the issues involved, we reserved the order.

10. We have gone through the averments made in the application, observations made in the report of the Joint Committee and submissions made in the replies filed by the respondents No.1 to 4 and other material on record.

11. The case involves substantial environmental questions of de-concretization of trees and protection of parks, open spaces, green belts in cities which are being over-concretized without providing adequate green cover or destroying the existing green cover.

12. It may be observed at the outset that concretization on road sides by use of interlocking tiles is not prohibited. In the Guidelines for the use of Interlocking Concrete Block Pavement Published by: Indian Roads Congress, the use of interlocking concrete block pavement is not

recommended for Expressways, National Highways, State Highways and Major District Road. However, if an MDR or State Highways passes through an habitation, their use is permitted. The Guidelines notice that Interlocking Concrete Block Pavements have been found to have applications in several situations. Such as : 1. Footpaths and Side-walks 2. Cycle Tracks 3. Residential Streets 4. Car Parks 5. Fuel Stations 6. Rural Roads through Villages 7. Toll Plaza 8. Highway Rest Areas 9. Bus Depots 10. Approaches to Railway Level Crossings 11. Intersections 12. City Streets 13. Truck Parking Areas 14. Urban Sections of Highways 15. Road Repairs during Monsoon 16. Container Depots 17. Port Wharf and Roads 18. Roads in High Altitude Areas. The Guidelines also acknowledge advantages and limitations of the use of the same. Layer of sand is used under and between the interlocking tiles. Use of interlocking tiles with sand without contamination is not prohibited as water can seep through the joints. Use of permeable block pavement in cities and towns can help replenish depleting underground sources of water, filter pollutants before they reach open water sources, help reduce storm water runoff and decrease the quantum of drainage structures.

13. However, concretization upto the roots and trunks of the trees is not permissible. In Original application No. 82 of 2013 filed in the matter of de-concretization around trees standing on roads, pavements, parks etc. this Tribunal vide its order dated 23.04.2013 directed public authorities, more particularly Municipal Corporation of Delhi, DDA, DTC, DMRC, NHAI and all Government respondents including the Director General of CPWD and the Chief Engineer, PWD that all the sign boards, names, advertisements, any kind of boards or signages, electric wires and high tension cables or other damaging elements be removed from the trees forthwith and that the concrete surrounding the trees within one metre of the trees be removed forthwith and due precaution taken in

future so that no concrete or construction or repairing work is done atleast within one metre radius of the trunk of trees.

14. Concretization around trees not only hampers root aeration but also the percolation of water which could ultimately lead to death of the tree.

15. Since concretization around trees leads to damage of the root system of the tree which ultimately leads to its death so an area of one meter is required to be left de-concretized around the base of the tree at the time of construction of the pavements or roads to facilitate percolation of water to the roots. The area should be leveled with earth/soil and grass/shrubs may be planted, if need be.

16. We are of the view that even concretization /tiling of road berms beyond footpath and central verge of the roads/ pathways also needs to be avoided and appropriate land scaping with plantation of grass, shrubs, flowering plants may be done which will not only allow drainage of water from the metalled portion of the road to the same and help in recharging of ground water but also add to aesthetics of the road without hampering the prospect of widening of the road if so required.

17. In view of the above Chief Secretary to Government of Punjab is directed to issue appropriate instructions within one month to all the Municipal Bodies/Civic Agencies/Government Departments/Gram Panchayats to ensure:-

(i) That all the sign boards, names, advertisements, any kind of boards or signages, electric wires and high tension insulated cables etc. placed on trees are removed within one month from the date of issuance of the instructions;

- (ii) That the trees which are already concretized are de-concretized, manually without use of JCB machines etc so that the roots and trunks are not damaged, by leaving soil filled space of one meter radius to allow percolation of water to the roots thereof within two months from the date of issuance of the instructions;
- (iii) That during fresh construction of roads/ pavements etc, a fresh clause is added in the tender documents that one meter area around the trees shall be left de-concretized/soil filled to allow percolation of water to the roots and that.
- (iv) That concretization of road berms beyond footpath and central verge of the roads/ pathways be avoided and appropriate landscaping with plantation of grass, shrubs, flowering plants may be done, as may be viable.

18. It may also be observed here that the area of the parks cannot be indiscriminately reduced in the name of making provision for parking and concretization of the same.

19. In **Bangalore Medical Trust v. B.S. Muddappa, (SC) 1991(4) SCC 54** Hon'ble Supreme Court allowed writ petition filed by the residents of the locality and set aside the diversion of the user and allotment of the site reserved for a public park to private persons for construction of a hospital. The observations made by Hon'ble Supreme Court in that case, which are also relevant to the present case, are reproduced as under:-

"24. Protection of the environment, open spaces for recreation and fresh air, play grounds for children, promenade for the residents, and other conveniences or amenities are matters of great public concern and of vital interest to be taken care of in a development scheme. It is that public interest which is sought to be promoted by the Act by establishing the BDA. The public interest in the reservation and preservation of open spaces for parks and play grounds cannot be sacrificed by leasing or selling such sites to private persons for conversion to some other user. Any such act would be contrary to the legislative intent and inconsistent with the statutory requirements. Furthermore, it would be in direct conflict with the constitutional

mandate to ensure that any State action is inspired by the basic values of individual freedom and dignity and addressed to the attainment of a quality of life which makes the guaranteed rights a reality for all the citizens. 1. See *Kharak Singh v. The State of U. P.*, (1964) 1 SCR 332 ; *Municipal Council, Ratlant v. Shri Vardhi.chand*, (1981) 1 SCR 97; *Francis Coralie Mullin v. The Administrator, Union Territory of Delhi*, (1981) 2 SCR 516; *Olga Tellis v. Bombay Municipal Corporation*, (1985) 3 SCC 545; *State of Himachal Pradesh v. Umed Ram Sharma*, AIR 1986 Supreme Court 847 and *Vikram Deo Singh Tomar v. State of Bihar*, AIR 1988 Supreme Court 1782.

25. Reservation of open spaces for parks and play grounds is universally recognized as a legitimate exercise of 'statutory power rationally related to the protection of the residents of the locality from the ill-effects of urbanisation.*2 2. See for e.g. : - *Karnataka Town and Country Planning Act, 1961*; *Maharashtra Regional and Town Planning Act, 1966*; *Bombay Town Planning Act, 1954*; *The Travancore Town and Country Planning Act, 1120*; *The Madras Town Planning Act, 1920*; and the Rules framed under these Statutes; *Town and Country Planning Act, 1971 (England and Wales)*; *Encyclopaedia Americana, Volume 22 page 240*; *Encyclopaedia of the Social Sciences, Volume XII at page 161*; *Town Improvement Trusts in India, 1945 by Rai Sahib Om Prakash Aggrawala, p. 35 et. seq*; *'Halsbury's Statutes, Fourth Edition, p. 17 et. seq.* and *Journal of Planning and Environment Law, 1973 p. 130 et. seq.* See also: *Penn Central Transportation Company v. City of New York*, (1978) 57 Law Ed 2d 631 438 US 104; *Village of Belle Terre v. Bruce Boraas*, (1974) Law Ed 2d 797 : 416 US 1; *Village of Euclid v. Ambler Realty Company*, (1926) 272 US 365; *Halsey v. Esso Petroleum Co. Ltd.*, (1961) 1 WLR 683. 26.

26. In *Agins v. City of Tiburon*, (1980) 447 US 255, the Supreme Court of the United States upheld a zoning ordinance which provided....it is in the public interest to avoid unnecessary conversion of open space land to strictly urban uses, thereby protecting against the resultant impacts, such as.... pollution,.... destruction of scenic beauty, disturbance of the ecology and the environment, hazards related to geology, fire and flood, and other demonstrated consequences of urban sprawl'. Upholding the ordinance, the Court said:- ...The State of California has determined that the development of local open-space plans will discourage the "premature and unnecessary conversion of open-space land to urban uses". The specific zoning regulations at issue are exercises of the city's police power to protect the residents of Tiburon from the ill-effects of urbanization. Such governmental purposes long have been recognised as legitimate. The zoning ordinances benefit the appellants as well as the public by serving the city's interest in assuring careful and orderly development of residential property with provision for openspace areas..." 3. See comments on this decision by *Thomas J Schoenbaum, Environment Policy Law-1985p. 438 et.seq.* See also summary and comments, (1980) 10 ELR 10125 et. seq.

27. The statutes in force in India and abroad reserving open spaces for parks and play grounds are the legislative attempt to eliminate the misery of disreputable housing condition caused by urbanisation. Crowded urban areas tend to spread disease, crime and immorality. As stated by the U. S. Supreme Court in

Samuel Berman v. Andrew Parker, (1954) 99 Law Ed 27: 348 US 26:- "..... They may also suffocate the spirit by reducing the people who live there to the status of (Per Douglas, J.).

28. Any reasonable legislative attempt bearing a rational relationship to a permissible state objective in economic and social planning will be respected by the Courts. A duly approved scheme prepared in accordance with the provisions of the Act is a legitimate attempt on the part of the Government and the statutory authorities to ensure a quiet place free of dust and din where children can run about and the aged and the infirm can rest, breath fresh air and enjoy the beauty of nature. These provisions are meant to guarantee a quiet and healthy atmosphere to suit family needs of persons of all stations. Any action which tends to defeat that object is invalid. As stated by the U. S. Supreme Court in Village of Belle Terre v. Bruce Boraas, (1974) 39 Law Ed 2d 797 :416 US 1 :- "...The police power is not confined to elimination of filth, stretch, and unhealth places. It is ample to lay out zones where family values, youth values, and the blessings of quite seclusion and clean air make the area a sanctuary for people." See also Village of Euclid v. Ambler Realty Company, (1926) 272 US 365. See the decision of the Andhra Pradesh High Court in T. Damodhar Rao v. The Special Officer, Municipal Corporation of Hyderabad, AIR 1987 Andhra Pradesh 171. "

20. It may be observed here that due to ever escalating prices in real estate, open spaces and green belts are encroached upon by the Land Mafia in active connivance with the concerned Administrative Officers or due to inaction/negligence on their part in taking requisite remedial action. The practices of encroaching upon green belts/parks by constructing /erecting religious structures/parking spaces/ Transformers/DG Sets etc. is widely prevalent. Most convenient method of encroachment on green areas/parks is construction of some religious structures which are also defended by projecting questions of faith and masquerading the procured support of devotees having women and children in the forefront. Despite directions by Hon'ble Supreme Court for preventing/demolishing such unauthorized constructions on public land, the State and its instrumentalities continue to pose ignorance even despite complaints by the residents and coverage even by the print and electronic media.

21. In view of importance of protection and proper maintenance of open spaces, parks, green belts and instances of conversion of part or whole of open spaces, parks, green belts in the State of Punjab coming up before this Tribunal, we consider it appropriate to widen the scope of the present proceedings and constitute a Joint Committee comprising of representatives of (i) MOEF&CC, (ii) CPCB, (iii) ACS/Principal Secretary, Department of urban Planning Government of Punjab, (iv) ACS/Principal Secretary, Department of Local Bodies, Government of Punjab (v) Director General, Town and Country Planning, Punjab, (vi) Chief Administrator, PUDA and (vii) PSPCB with the directions to (1) compile/catalogue information regarding all green areas/parks/green belts reserved in the respective areas of all the Municipal Bodies in the State of Punjab with requisite details as to (a) location, revenue number, boundaries, measurements etc.; (b) present status regarding plantation/green cover, user, maintenance, and agency deputed for maintenance; and (c) encroachments (including encroachments made by unauthorizedly constructing religious structures) made on the same with requisite details as to who made the encroachments, when and in which manner and what action has been taken/is to be taken for removal of such encroachments specifically mentioning Court cases decided/pending regarding the same; (2) to get entire such information uploaded on the website of the District Administration and Municipal Bodies for seeking public participation for protection of green areas/parks/green belts reserved in the respective areas of all the Municipal Bodies in the State of Punjab against any encroachment and also for ensuring proper use and maintenance thereof; and (3) to verify factual position of per capita green cover and assess its adequacy in view of the number of residents and give suggestions for remedial measures required to be taken for proper user, development, maintenance,

protection, and improvement of such green areas/parks/green belts reserved in the respective areas of all the Municipal Bodies in the State of Punjab.

22. The Committee may constitute sub committees, seek reports from concerned administrative officers, NGOs, Civil Societies Environmental Activists or other experts in the field as may be considered appropriate and may also seek complaints from Members of Public. The Member Secretary, PSPCB shall be the Nodal Officer for coordination and compliance and all necessary expenses including travel, boarding, lodging expenses shall be borne by PSPCB. Report may be submitted by the Joint Committee within three months to this Tribunal by email at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR supported PDF and not in the form of Image PDF and also to the Chief Secretary to Government of Punjab who shall place the same before the Government of Punjab for such action on the recommendations of the Joint Committee as may be considered appropriate.

23. We are also of the considered view that the matter of protection of green areas/public parks/green belts and trees needs proper statutory framework for reservation, development, maintenance and preservation of green areas/parks/greenbelts and protection of trees. Besides the statutory frame work, appropriate administrative guidelines are also required to be issued for identification, demarcation, development, maintenance and preservation of green areas/parks/green belts and protection of trees in the urban development/colonization schemes/layouts.

24. In the context of increasing environmental air and water pollution, we consider it appropriate to make a suggestion to Government of Punjab to consider the desirability of making suitable amendments in the

relevant Rules in this regard. We also find that at present there is no legislation in the State of Punjab for protection of green areas/parks/green belts and trees and we also consider it appropriate to suggest to Government of Punjab to consider desirability of enactment of appropriate legislation on the lines of the Uttar Pradesh Parks, Playgrounds and Open Spaces (Preservation and Regulation) Act, 1975 and the Delhi Preservation of Trees Act, 1994/the Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976. The Chief Secretary to Government of Punjab is directed to place the above suggestion before the Government of Punjab within two months for such action as may be considered appropriate.

25. In view of the above the present application is disposed of with direction to the Chief Secretary to Government of Punjab to file his affidavit mentioning in detail action taken for issuance of instructions and placing the recommendations of the joint Committee and also the suggestion given by this Tribunal before Government of Punjab as mentioned above before learned Registrar General of this Tribunal, within six months by email at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF, who may, if necessary, put up the matter before this Bench for further directions.

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

January 30th, 2024
AG

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Annexure O-4

The cities stripping out concrete for earth and plants

23 February 2024

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By Chris Baraniuk, Features correspondent



City of Leuven

Lifting up the paving slabs reveals the potential of the earth beneath (Credit: City of Leuven)

From Australia to Ontario, cities are taking up unnecessary stretches of concrete and asphalt, allowing nature to take hold in their place.

On a hot July day, Katherine Rose picked up a sturdy metal pole and jammed it under the tempting lip of a pre-cut concrete slab. Rose, communications and engagement director at Depave, a non-profit in Portland, Oregon, was sweating in the heat – but she was going to win this fight.

The grubby, rectangular section of urban crust in front of her was about to move. Pushing down on her metal bar, applying it like a lever, she eased the concrete covering up and away. Now sunlight could fall once again on the ground below. A mess of gravel and dirt that was, to Rose, just bursting with potential.

"It feels like you're liberating soil," she says, recalling the summer gathering where she and around 50 volunteers **removed roughly 1,670 sq m (18,000 sq ft) of concrete** from the grounds of a local church. "It's envisioning and fully realising a dream that I think we all have," says Rose. The dream, that is, of bringing nature back into our midst.

The idea of depaving, sometimes known as **desalting**, is a simple one – replace as much concrete, asphalt and other forms of hard landscaping as possible with plants and soil. It's been around since at least 2008, when the Depave group in Portland was founded. Proponents say depaving allows water to soak into the ground, which reduces flooding in times of heavy rain – aiding the "sponginess" of cities. Native plants help wildlife cling on in urban spaces, and by planting trees you can increase shade, protecting residents from heatwaves. Injecting city streets with greenery may even improve people's mental health, too.

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THE FUTURE OF FOOD SUPPLY

How strategic investments in global food supply chains support Mitsui & Co.'s wellness initiatives.

But if depaving is ever going to really take off, it will have to expand beyond a handful of eager environmentalists and volunteers. With the climate crisis deepening, some cities and even entire regions are beginning to adopt depaving as part of their climate adaptation strategies. It's time, some say, to start smashing up our concrete streets in a big way – to create spaces better for nature.



City of Leuven

Exposing more of the ground in urban spaces can help absorb rainfall and reduce flooding, as well as boost biodiversity (Credit: City of Leuven)

Whenever Rose walks through a city these days, she can't help but notice places where you could strike out a section of asphalt and put in some plants. "I'm constantly just wanting to do more," she confesses. "It's hard not to see it everywhere."

Sign up to Future Earth

1076
[Sign up to the Future Earth newsletter](#) to get essential climate news and hopeful developments in your inbox every Tuesday from Carl Nasman. This email is currently available to non-UK readers. In the UK? [Sign up for newsletters here](#).

Her group says it has depaved more than 33,000 sq m (360,000 sq ft) of asphalt in Portland alone since 2008 – an area equivalent to nearly four and a half football pitches. The work is "joyous", says Rose, because it unites enthusiastic local volunteers. They get a safety briefing and then muck in together.

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BRIDGING THE GAPS IN WELLNESS

How Mitsui & Co.'s investments in food and healthcare aim to meet growing demand for w

Green Venture, an environmental non-profit in Ontario, Canada, has been inspired in part by the depaving projects in Portland. Giuliana Casimirri, executive director, explains how she, her colleagues, and volunteers have begun inserting miniature gardens replete with native trees in a run-down district in the city of Hamilton. "Before, it was somewhere you would quickly try to walk through," she says. "Now there are places you might stop or have a chat. Sit and read the paper." In Hamilton, flooding can cause **sewage to get mixed into runoff** that flows into Lake Ontario, the source of the city's drinking water. Green Venture and other local organisations are keen to reduce the chances of that happening, says Casimirri. They view depaving as a key tactic. Certainly, studies have demonstrated that impermeable surfaces in gardens such as concrete **increase flood risk in urban areas**. Rose says her group's efforts in Portland mean that approximately 24.5 million gallons of rainwater is diverted from entering storm drains each year. In Leuven, Belgium, in 2023 alone, Baptist Vlaeminck, who leads Leuven's Life Pact climate adaptation project, calculates that the removal of 6,800 sq metres (73,000 sq ft) of hard surfacing allowed for the infiltration of an additional 377,000 gallons (1.7 million litres) of water into the ground. "With climate change, extreme weather rainfall events are going to increase and so [depaving is] not a nice-to-have – it's a necessity," Casimirri adds.

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SUPPORTING GLOBAL FOOD SUPPLY

As populations grow and nutritional preferences change, supply chains must eventually meet demand.

The question is whether the authorities responsible for cities, and planning, realise this. In most parts of the world, depaving can still be described as a fringe activity. "We're going to need a scale of investment that has a lot more zeroes on it," says Thami Croeser at RMIT University, Melbourne's Centre for Urban Research. Community-led and DIY efforts on driveways and on local streets with permission are fantastic, he adds, but it's even better to think of depaving and greening as the introduction of a new kind of infrastructure in a city. It requires the same level of planning and investment as, say, a new railway.



Elle Hygge

The depave movement in Portland, Oregon has inspired a wave of cities to pull up their asphalt and concrete (Credit: Elle Hygge)

In Europe, at least, some municipalities have begun to treat depaving seriously. Residents of London in the UK are **encouraged to depave their gardens**, for example. The city of Leuven in Belgium says it is embracing depaving – or "ontharden" – in a big way. **The suburban district of Spaanse Kroon**, home to around 550 people, is one of the latest targets of a depaving and renaturing initiative spearheaded by the city. The plans involve removing significant volumes of asphalt from the residential area and forcing cars to share the same part of the road as pedestrians and cyclists.

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"We are scaling up now, we are setting up a team dedicated to depaving," says Vlaeminck.

Such projects have to meet the needs of everyone in the city. Vlaeminck says that, to support people with impaired vision or mobility issues, unused areas of road or pavement are prioritised for depaving and sufficient space – more than a metre – is safeguarded on pavements to allow people plenty of room. Existing paving left in place is also renewed or repaired to ensure there are no bumps or unevenness. In situations where pavements are removed completely, for shared use of a roadway in low traffic neighbourhoods, Vlaeminck says depaving teams introduce measures to reduce the speed of cars.

Both Depave in Portland and Green Venture in Ontario say they work with communities to ensure accessibility requirements are met. Casimirri refers to a recent project that replaced broken, uneven concrete with shrubbery and level walkways between.

Among the initiatives instigated by Leuven is a "tile taxi" – a small truck that officials will happily send to your home so you can throw in concrete tiles or cobblestones you have removed from your garden. The material is later reused rather than thrown away, says Vlaeminck, who adds that several million euros have been set aside by Leuven to fund depaving and renaturing projects such as this.

And there's more. Since January 2024, developers in Leuven have had to demonstrate that any rain that falls on new or significantly renovated homes can either be captured and re-used on-site or filtrate into the property's garden rather than pool up and cause a flood. If developers can't prove their designs are extreme rainfall-ready, they won't be approved, says Vlaeminck.

France, too, is making depaving official, says Gwendoline Grandin, an ecologist with the Île-de-France Regional Agency for Biodiversity. Nationally, the French government has made **€500m (\$540m/£430m) available for urban greening** – this includes depaving but also installing green walls and roofs, for example. Part of the motivation is to make towns and cities more resilient to summer heatwaves, which **have badly affected parts of France in recent years**.

Some of the projects now underway are significant in size, such as **a former parking area near a forest in the Paris region**. An area of 45,000 sq m (480,000 sq ft) has been depaved – formerly a hodgepodge of asphalt, pathways and concrete interlaced with grass. With the hard landscaping now gone, level ground is being reshaped to introduce dips and gullies that catch water, and the whole area will soon be planted over, too.



Local schemes are often backed by residents keen to see more green in their local area (Credit: City of Leuven)

In Croeser's own city of Melbourne, he and colleagues have studied the potential space available for renaturing, if thousands of parking spaces were depaved and converted into miniature gardens. **In a 2022 study, they simulated the impact** based on a series of scenarios – the most ambitious of which involved removing half of the open-air parking spaces in the city, about 11,000. Croeser argues that there is sufficient off-street parking available, for example on the ground floor of buildings, in Melbourne to ensure that people wouldn't be left without somewhere to leave their vehicle – but those interior parking spaces would need to be made publicly accessible.

Carbon Count

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"The basic principle was no net loss of access to parking," he says. "And we get 50-60 hectares [120-150 acres] of green space that keeps the city cool, prevents flooding." It might seem unlikely that small pockets of nature dotted here and there throughout a large city like Melbourne could benefit wildlife significantly, but Croeser says these fragments of habitat are crucial. They allow species to move around and cope in an environment that is, ultimately, very different to the one in which they evolved. In their 2022 study on depaving in Melbourne, Croeser and his colleagues included modelling that suggested a modest increase in greenery could allow species such as

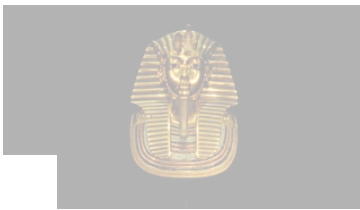
the blue-banded bee to roam across a far greater area of urban habitat than before. Rose agrees with Croeser that, for depaving to change the world, entire cities and even whole countries will have to embrace it fully. But she emphasises that, in order to reach that point, communities must express that this is something they want. "It starts with people pushing their government and starting these conversations on a small, local level," she says. "That's how it takes hold."

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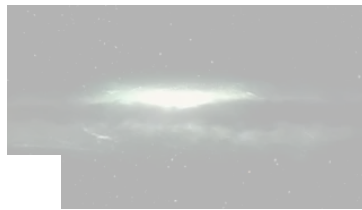
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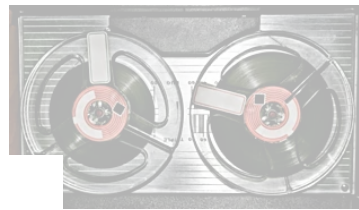
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AUGUST 31, 2023

A Cooler Future Means a World With Less Pavement

Amid climate-fueled heat waves and floods, cities around the country are rethinking the streetscape.

LUCY SHERRIFF



Traffic on a Los Angeles freeway during the evening rush-hour commute on April 12, 2023.
(Frederic J. Brown / Getty)

This article originally appeared in Nexus Media News.

It all started because a man named Arif Khan wanted a garden. In 2007, he had recently moved into a house in Portland, Ore., whose backyard was covered in asphalt. Some friends helped him tear up the impervious surface, and soon after, they won a small grant to carry out a similar project in front of a local café.

“It was a one-off,” said Ted Labbe, cofounder of Depave, an urban greening movement. “But it was so successful that the next year we got solicited to do three projects, and then five the year after that. It just kept escalating.” In

the 15 years since breaking ground on Khan's backyard, Depave has completed 75 projects in schoolyards, churches, and other community spaces across Portland.

The Depave movement has spread across the United States and Canada in recent years as climate-related extreme heat and flooding have made some cities rethink the wisdom of all that heat-absorbing, impervious surface area.

Depave's newest chapter is in Chicago, where about half of the population lives in areas where temperatures are at least eight degrees higher than the city's base temperature, a disparity that can prove deadly in heat waves. More than 60 percent of the city is covered in impervious surfaces, and when record rains fell in early July, more than 12,000 residents reported flooding in their basements.

"Environmental justice communities are suffering from a lot of pavement-related issues," said Mary Pat McGuire, a professor of architecture at the University of Illinois, and the founder of Depave Chicago. "We're trying to bring attention to it so that the city will start treating this as a critical part of climate adaptation and social justice."

Since launching in 2022, McGuire and a group of volunteers have been holding listening sessions across the city to identify local needs. She and her cohort recently finished drawing up plans for their pilot project: greening a public schoolyard in West Englewood, a low-income neighborhood in southwest Chicago.

"They teach the Montessori method, which is very hands-on," McGuire said. Depave consulted with sixth, seventh, and eighth graders, along with teachers, parents, and school board members to draw up a blueprint for the new schoolyard. It includes pollinator gardens, an outdoor classroom, log structures, bioswales, and shady trees. "Green infrastructure isn't clean, neat and tidy," McGuire said. "We're going to get messy."

Paved roads and parking lots take up about 30 percent of urban areas in the United States. (In some cities, like New York, that figure is closer to 61 percent.) Parking lots alone cover more than 5 percent of developed land in the lower 48 states, according to the US Geological Survey.

"We've had a love affair with paving things for several generations," said Brendan Shane, climate director at the nonprofit Trust for Public Land. "We have too many unnatural paved surfaces and not enough natural surfaces, and that's creating these urban heat islands [and] rapidly flooding neighborhoods."

Extreme heat and flooding are particularly acute in low-income communities of color, which typically have less green space than wealthy, white neighborhoods, a legacy of redlining practices.

Replacing asphalt with greenery has benefits beyond lowering temperatures and reducing flood risk. It's also associated with lower stress levels, a reduction in noise, fewer traffic-related injuries, and even restoration of local biodiversity. It can also improve air quality: Asphalt releases hazardous air pollutants into communities, especially in extreme heat and direct sunlight.

"We want to bring it to the city's attention that this is a critical part of climate adaptation and solving social inequity," McGuire said.

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ELIE MYSTAL

Amid climate-fueled heat waves and floods, cities around the country are rethinking the streetscape. In Phoenix, Ariz., where asphalt can get so hot during heat waves it can give third-degree burns, officials are painting surfaces with reflective grey paint. Nashville, Tenn., which experienced deadly floods back in 2010, has transformed alleyways into blooming, bee-filled rain gardens.

More than a decade ago, Chicago invested \$14 million in building what it dubbed the “greenest street in America.” The two-mile stretch of Blue Island Avenue and Cermak Road in the Pilsen neighborhood sports rain gardens, permeable pavements, and solar-powered street lights.


“There are a lot of great strategies and plans out there,” says Vincent Lee, a principal at Arup, an engineering and architecture firm. Last year, Arup released a study examining the “sponginess”—or ability to absorb rainfall—of several cities and making the case for cities to invest in nature-based solutions to prevent flooding. “But implementation is a major challenge due to lack of funding, outdated policies and codes and minimal cross-sector collaboration.”

Many advocates say schoolyards are ideal sites for greening projects because they represent an opportunity to educate students about climate resilience. Space to Grow, another Chicago organization, has overhauled 34 schoolyards over the last decade, replacing asphalt with permeable sports fields, rain gardens, and other porous surfaces.

“Our schools are the center of the community, and we want to make sure kids are excited to be in those spaces,” said Meg Kelly, Space to Grow’s director.

According to the organization’s data, replacing asphalt with permeable sport fields, rain gardens, and other porous surfaces has reduced ground temperatures by up to 54 degrees Fahrenheit and captured more than 3.5 million gallons of stormwater, alleviating neighborhood flooding.

McGuire said she wants Depave Chicago to help neighbors avoid the next flood or find respite from the next heat wave, but she also wants to help Chicagoans envision a different future for their city.

“It’s about changing attitudes towards concrete,” she said. “We’ve been missing an opportunity to embrace nature in the city, and I’m just trying to get people to look at the world around them and dream of something different.” 

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Lucy Sherriff

Lucy Sherriff is a journalist based on the West Coast who writes, produces podcasts, and directs documentaries. She covers social justice, climate, and the relationship between people and the planet.

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Om Prakash <omprakash.life@gmail.com>

Copy of Objection on behalf of the Applicant in OA No. 363 of 2022 Vikrant Tongad & Anr. Vs. State of Uttar Pradesh & Ors.

1 message

Om Prakash <omprakash.life@gmail.com>

Sat, Sep 7, 2024 at 3:32 PM

To: gicgicgeorge.adv42@yahoo.com, pradeepmisra@yahoo.com, anandbhadola1979@yahoo.com, Shlok Chandra <shlokchandra@chandraLawchambers.com>, "shivamsaksena17@gmail.com" <shivamsaksena17@gmail.com>, "chaudharylawoffices@gmail.com" <chaudharylawoffices@gmail.com>

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Thanks & Regards

Counsel for the Applicant

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