BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

Original Application No. 102 of 2021 (SZ)

With

Original Application No. 02 of 2020 (SZ)

IN THE MATTER OF:

S. Kumaradasan,
Vice President,
Velachery, Chennai …Applicant(s)

Versus

The Government of Tamil Nadu,
Chief Secretary, Chennai and Others …Respondent(s)

With

Tribunal on its own motion SUO MOTU based
On the News Item in Dinamalar Tamil newspaper,
"Velachery lake-full due to Monsoon" Plea for preventing
sewage waste get mixed in the lake.

And

The Government of Tamil Nadu,
Rep by its Chief Secretary and Others …Respondent(s)

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Through
Dr. D. Shanmuganathan
Standing Counsel For Government of Tamil Nadu
National Green Tribunal
Southern Zone
DATE: 05.01.2026

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STATUS REPORT FILED BY THE EXECUTIVE ENGINEER

I, R.ARUNMOZHI S/o RAJU aged about 49 Years currently discharging duties as Executive Engineer, Water Resources Department (WRD), Lower Palar Basin Division, Kanchipuram having my office at Kancheepuram, do hereby, solemnly affirm and sincerely state as follows:

1. It is humbly submitted that the present Status Report is filed in compliance with the directions issued by this Hon'ble Tribunal in O.A. No. 102 of 2021 (SZ) read with O.A. No. 02 of 2020 (SZ), requiring the Water Resources Department to place on record the factual and technical details relating to the subject land, Velachery Lake, flood mitigation measures, and the utilization of lands resumed from the Madras Race Club.

2. The present report consolidates judicial developments, administrative actions, hydrological studies, soil investigations, watershed delineation, flood mitigation works undertaken, and the ecological rationale behind the proposed Eco Park (Blue–Green Infrastructure Model) at Guindy - Velachery.

HISTORY AND LITIGATIONS PERTAINING THE SUBJECT LAND

3. It is humbly submitted that the lands were originally leased to the Madras Race Club in the year 1946, and during those time the said lands were situated outside the limits of the Chennai District/City, in the erstwhile Chengalpattu District. However, owing to rapid urbanisation and expansion of the city over the decades, the demised lands are now located in the heart of Chennai city. In the changed urban context, the continued use of such a vast and strategically located land parcel for activities such

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as horse racing, recreation, and entertainment catering to a limited and select group of individuals incorporated as a private entity, no longer subserves the larger public interest.

4. Therefore, G.O. (Ms) No. 343, Revenue and Disaster Management Department on 06.09.2024, was passed after due and careful consideration of the report submitted by the District Collector and in furtherance of the overarching public interest. By invoking Clause (iii) of the lease conditions, the Government consciously resolved to terminate the lease granted in favour of the Madras Race Club and taken over possession of the Land. Accordingly, the Director of Horticulture and Plantation Crops requested the District Collector, Chennai, to transfer the lands resumed from the Madras Race Club for the creation of public horticulture gardens, public green spaces, and public utilities. Based on the said requisition, and out of the total extent of 160.86 acres, an extent of 118.00 acres has been transferred to the Department of Horticulture and Plantation Crops vide G.O. (Ms.) No. 371, Revenue and Disaster Management Department, Land Disposal Wing, LD 4 (1) Section, for public purposes. Based on the aforesaid Government Order, possession of the land was formally handed over to the Deputy Director of Horticulture, Chennai, on 20.09.2024. Owing to the onset of the monsoon season, developmental works relating to the proposed park could not be commenced during the period from October to December 2024. In the interregnum, the Greater Chennai Corporation undertook excavation of ponds within the resumed land as an immediate flood mitigation measure during the monsoon. Thereafter, for the purpose of facilitating further developmental activities, the land was demarcated and surveyed by the Tahsildar and Surveyor of Guindy and Velachery Taluks, in the presence of the Deputy Director of Horticulture, Chennai, on 24.04.2025.

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5. It is pertinent to mention that the city of Chennai has experienced severe and recurrent flooding, notably during the years 2015, 2019, and 2024, causing widespread waterlogging, displacement, and immense hardship to its residents. Taking into account the urgent necessity to augment urban green spaces in Chennai and to implement effective flood-prevention and mitigation measures, the State has taken a considered decision to resume and utilize lands earlier leased to Madras Race Club. The said lands are now proposed to be deployed for environmentally sustainable development, including green infrastructure and flood mitigation, with a view to alleviating the recurring suffering of the people of Chennai and safeguarding the city against future disasters.

6. It is further submitted that the green cover in Chennai is significantly low when compared to other metropolitan cities in India. As per the Chennai City Action Plan prepared by the Greater Chennai Corporation in 2023, the per capita green space in Chennai stands at 8.75 square metres per person, which falls short of the 9.5 square metres per person prescribed by the World Health Organization for healthy urban living. With a view to bridge this deficit, achieve the prescribed norms, and promote the larger public interest, the Government has taken a considered decision to optimally utilize the said valuable land by developing public gardens, green spaces, and allied public utilities. This involves the creation of enhanced green cover, urban lung space, and water storage systems for soil recharge, apart from utilizing the remaining lands for flood mitigation during periods of heavy rainfall in Chennai. The ponds created within the premises, each having a storage capacity of approximately 25,000 cubic metres, have significantly contributed to mitigating flooding in Velachery and the surrounding areas, and effectively safeguarded residents during the 2024 flood events.

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7. It is humbly submitted that the State has acted strictly in furtherance of public interest, which, as envisioned by the founding fathers of the Constitution, finds its clearest expression in the Directive Principles of State Policy. The Directive Principles embody, par excellence, the constitutional conception of public interest and guide the State in securing social, economic, and environmental welfare. The expression "public interest" signifies that which is best for society as a whole, encompassing the general welfare of the public that warrants recognition and protection, and relates to matters in which the community at large has a direct and substantial stake.

8. It is humbly submitted that the Department of Horticulture and Plantation Crops, vide Circulation Agenda No. 4/2025-26, proposed to undertake preliminary works for the establishment of a new Eco Park in Guindy and Velachery Taluks of Chennai District, at a total outlay of Rs. 50,00,000/- (Rupees Fifty Lakhs only). The said proposal, to be financed from the Farm Receipt Account of the Tamil Nadu Horticulture Development Agency (TANHODA), has been duly approved, and preparatory works have since commenced. The approved expenditure includes capital components such as digging of borewells with erection of motors and EB connections, plantation of trees and ornamental plants along the boundaries, and provision of irrigation facilities, as well as recurring expenditure towards security and engagement of casual labourers for maintenance, aggregating to the sanctioned amount of Rs. 50 lakhs.

Sl. No.	Particulars	Total Amount (Rs)
I	**Capital Expenditure**	
1	Digging of Borewell and erection of Motor and EB Connection (2Nos)	20,00,000.00

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2	Planting of Trees and Ornamental plants around the boundaries	10,00,000.00
3	Provision of Irrigation Facilities	10,00,000.00
	Total (A)	**40,00,000.00**
II	**Recurring Expenditure**	
4	Provision of Security and Casual Labors for Maintenance Work	10,00,000.00
	Total (B)	**10,00,000.00**
	Grand Total (A) + (B)	**50,00,000.00**

9. It is humbly submitted that the Commissioner, Greater Chennai Corporation, inspected the ongoing works within the subject property, particularly relating to the excavation and expansion of ponds for flood mitigation. The detail of the pond works carried out in the Madras Race Club premises reveal a substantial enhancement in water-holding capacity. The original storage capacity of 0.39 Mcft prior to 2024 has been expanded through works undertaken during 2024 and subsequent phases, resulting in a present capacity of 4.60 Mcft as on 20.06.2025, with a proposed additional widening in 2025. Upon completion, the expected total storage capacity will be 8.66 Mcft, with a cumulative water spread area of 49,072 sq. metres, achieved through a combination of existing and newly created ponds. These works demonstrate a systematic and phased approach to augment rainwater storage and reduce flooding in surrounding localities.

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Madras Race Club Pond Details:

Description	Area (Sq.m.)	Cubic Meters	Litres	MCFT	TMC
Original Capacity before 2024	2,814	10,920	1,09,20,000	0.39	0.00039
Expansion During 2024	23,258	119,440	11,94,40,000	4.22	0.00422
Current Capacity (As on 20.06.2025)	26,072	1,30,360	13,03,60,000	4.60	0.00460
Proposed Additional Widening Capacity-2025	23,000	1,15,000	11,50,00,000	4.06	0.00406
Expected Total Capacity	**49,072**	**2,45,360**	**24,53,60,000**	**8.66**	**0.00866**

Sl. No.	POND	ORIGINAL			2024 expansion			Proposed Additional expansion for 2025			Expected Pond Capacity		
		Area (Sq. m)	Depth (Metre)	Volume (Cubic Meter)	Area (Sq.m.)	Depth (Meter)	Volume (Cubic Meter)	Area (Sq.m)	Depth (Metre)	Volume (Cubic Meter)	Area (Sq.M)	Depth (Metre)	Volume (Cubic Meter)
1.	Existing Pond 1	1,239	5	6,195				-	-	-	1,239	5	6,195
2.	Existing Pond 2	1,575	3	4,725	1,098	5	8,640	-	-	-	2,673	5	13,365
3.	New Pond 1	-	-	-	4,000	5	20,000	6,000	5	30,000	10,000	5	50,000

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4.	New Pond 2	-	-	-	3,500	5	17,500	4,500	5	22,500	8,000	5	40,000
5.	New Pond 3	-	-	-	7,124	5	35,620	3,500	5	17,500	10,624	5	53,120
6.	New Pond 4	-	-	-	7,536	5	37,680	9,000	5	45,000	16,536	5	82,680
	Total	2,814		10,920	23,258		1,19,440	23,000		1,15,000	49,072		2,45,360

10. It is humbly submitted that, pursuant to the said policy decision, the Department of Horticulture and Plantation Crops issued a Request for Proposal (RFP) dated 20.06.2025 for engaging professional consultancy services for the establishment of the proposed Eco Park at Guindy, Chennai. The objective of the RFP is to appoint a suitable consultant to undertake a comprehensive study and prepare a Detailed Project Report, in accordance with the scope of work prescribed in the tender documents. The bidding consultancy firms have been specifically instructed to incorporate urban flood mitigation considerations in their design proposals. The proposed Eco Park envisages features such as sponge ponds, small ponds, and interconnected water bodies to function as storm-water storage structures, mitigate flooding during heavy rainfall, and serve as a model eco-park integrating urban flood resilience as a core component.

Further, Government of Tamil Nadu, after due deliberation, has taken a considered decision that the large tract of land in question, located in the heart of Chennai city, is required for public purposes, namely the establishment of an Ecological Park integrated with flood mitigation measures. In furtherance of this decision, the State

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Government has already facilitated the excavation of four ponds within the subject lands to store excess rainwater, thereby preventing inundation and significantly mitigating flood risks in Velachery, Adambakkam, Madipakkam, Guindy, Pallikaranai, and the adjoining areas. The said measures underscore the State's commitment to sustainable urban planning, environmental protection, and public welfare.

11. It is humbly submitted that the Madras Race Club had filed O.A. No. 401 of 2025 seeking an interim order of *status quo* in respect of the subject land, pursuant to which the Hon'ble Madras High Court was pleased to grant an interim order of *status quo* by order dated 04.07.2025. Aggrieved by the said order, the State preferred O.S.A. No. 335 of 2025 before the Hon'ble Division Bench of the Madras High Court. The Hon'ble Division Bench, after due consideration of the facts and the larger public interest involved, was pleased to allow the appeal by order dated 25.11.2025, thereby modifying the order of status quo and permitting the State to proceed with the works. It is humbly submitted that Special Leave petition was preferred by the Madras Race Club against order modifying status quo and state to carry out infrastructural projects. Upon due consideration of the nature, scope, and public importance of the project, the Hon'ble Supreme Court, by its order dated 30.10.2025 passed in SLP (C) No. 31175 of 2025, was pleased to permit the State to proceed with the proposed Ecological Park. The Hon'ble Supreme Court upheld the order of the Hon'ble High Court and clearly affirmed the settled legal position that interim injunctions or stays ought not to be granted against public infrastructure projects undertaken in larger public interest, thereby declining to interfere and enabling the continuation of the project, subject to final adjudication with the following directions,

> *" 1. Heard the learned senior counsel appearing for the respective parties.*

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2. While we are not inclined to interfere with the impugned judgment and order passed by the High Court, we clarify that the portion in paragraph no. 25 which reads, "...permit the State to carry out all works relating to strengthening/development of pond and any other project of public interest and the respondent club shall co-operate and not obstruct such work....." shall entitle the ***Respondent(s)-State only to create what is required for the eco-park, and will be subject to final decision.***

3.The Division Bench of the High Court shall endeavor to dispose of the application(s) expeditiously.

4.With these observations, the Special Leave Petition is disposed of.

5. Pending application(s), if any, shall stand disposed of."

The Hon'ble Supreme Court further directed expeditious disposal of the pending applications before the Hon'ble High Court, thereby enabling the State to proceed with preliminary and essential works in the larger public interest.

12. It is further submitted that the works undertaken by the Department of Horticulture and Plantation Crops for the maintenance and development of green cover are of substantial public importance, and in consonance with the directions of the Hon'ble Supreme Court and the Hon'ble Division Bench of the Madras High Court, the said works were expedited, particularly with respect to the strengthening of ponds in the subject land.

Subsequently, the Director of Horticulture and Plantation Crops, along with senior departmental officials, inspected the Eco Park site on 29.10.2025 for initiation of preliminary works, during which it was decided to immediately commence the following activities:

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- Avenue tree plantation;
- Bund strengthening works; and
- Establishment of nursery facilities.

Further, the Agriculture Production Commissioner and Secretary to Government and the Director of Horticulture and Plantation Crops inspected the proposed Eco Park site on 30.10.2025 for initiation of preliminary works. Thereafter, the foundation stone for the Eco Park was laid by the Hon'ble Chief Minister of Tamil Nadu on 01.11.2025, and the Hon'ble Chief Minister subsequently inaugurated the avenue tree plantation, nursery establishment, and bund strengthening works at the Guindy Eco Park. As on 03.11.2025, a total of 447 avenue trees has been planted along a stretch of approximately 2.5 kilometers, and bund strengthening works have been commenced by the State Government.

The proposed Eco Park is envisaged as an integrated ecological and recreational space comprising, inter alia, a nature-based children's play area, open activity lawns, lakeside cafeteria, sensory gardens, cactus and succulent garden, butterfly garden, aviary habitat center, perennial flower garden, orchidarium, shaded walkways, herbal garden integrating Siddha traditions, natural lake edge and wetlands, bird habitat islands, forest experience zone, and walking trails. Funds for the project are proposed to be sought based on the Detailed Project Report (DPR). In continuation of the establishment of the nursery on 01.11.2025, the sale of flowering plants, ornamental plants, seeds, and tree saplings has been made available to the general public, and a Tamil Nadu Horticulture Development Agency (TANHODA) outlet has also been established within the Eco Park premises for the sale of horticultural products.

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13. It is humbly submitted that the Hon'ble Division Bench of the Madras High Court, while disposing of the interim application seeking maintenance of status quo in the subject land in O.S.A. No. 335 of 2025 and C.M.P. No. 25967 of 2025, dated 25.11.2025 was pleased to record the following findings, which clearly recognise the overarching public interest involved in the development of the Eco Park. The Hon'ble Court held as follows:

" 6.3 ***Eco park is intended to serve multiple purposes.*** *Firstly, it is intended to* ***mitigate the risk of flooding, which the city increasingly faces with each passing monsoon.*** *Secondly, it is necessary to reiterate* ***the grave concerns surrounding air pollution and AQI levels,*** *reduction of which forms a central part of the rationale behind the Eco park. Air pollution today is not merely an environmental issue; it has become a public health emergency. The experience of the citizens of Delhi in the recent past is a stark reminder, where escalating AQI levels have led to lock downs, closure of schools, disruption of public life, and severe health impacts, particularly for vulnerable groups such as children and the elderly. Thirdly,* ***it is intended to promote tourism.*** *Fourthly,* ***it would serve as a natural habitat to several species of flora and fauna.*** *All of the above are conceived in public interest.*

6.4. The findings in various reports including one referred supra would reveal serious systemic lapses in flood management and this in the considered view of this Court, demonstrate an urgent and compelling need for the ***State to undertake remedial, preventive and long-term infrastructural measures.*** *The present projects viz., excavation and development of 4 ponds and creating of an Eco park, is conceived to improve air quality, reducing pollution sources,* ***and preventing the city from being inundated/ravaged by floods due to rains and being pushed into the same cycle of environmental crisis.***

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7. We prima facie find that there is ***an overarching public interest in ensuring that the projects proposed in the suit schedule property are proceeded with unhindered/unimpeded. We are thus inclined to modify the order of "Status Quo" and permit the State to carry out all works related to strengthening/development of ponds to store excess rain water while permitting the development of Eco park which is conceived to mitigate adverse impact of floods, promote tourism, reduce pollution and serve as a natural habitat for several flora and founa species.***

8. Accordingly, the original side appeal stands allowed. No costs. Consequently, connected miscellaneous petition is closed."

The aforesaid observations of the Hon'ble Division Bench unequivocally affirm that the excavation and development of ponds and the establishment of the Eco Park on the subject land are rooted in compelling public interest, aimed at flood mitigation, air quality improvement, environmental protection, biodiversity conservation, promotion of tourism, and safeguarding public health, and therefore warrant to be proceeded with without hindrance or impediment.

RATIONALE BEHIND ESTABLISHMENT OF ECO PARK

14. It is humbly submitted that the Agricultural Production Commissioner and Secretary to Government, Agriculture - Farmers Welfare Department, has categorically instructed that the proposed Eco Park at Guindy shall be conceptualised and designed by integrating flood mitigation as a core planning principle, rather than as an ancillary feature. The guiding objective is to retain, protect, and enhance the existing ponds, low-lying areas, and natural depressions by restoring them as functional wetlands, enabling the site to act as a natural sponge during monsoon

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seasons. These restored wetlands are intended to absorb, store, and gradually release storm water, thereby significantly reducing the risk of urban flooding in the surrounding residential localities.

15. It is further submitted that instead of disturbing or altering the site's natural hydrology, the Eco Park safeguards and rejuvenates the existing water bodies as ecologically productive assets, simultaneously promoting biodiversity conservation, public recreation, groundwater recharge, and urban climate resilience. The Eco Park thus represents a balanced and sustainable solution, addressing recurring flood concerns while providing a much-needed green lung and recreational hub for the residents of Chennai.

ECOLOGICAL & HYDROLOGICAL CONSIDERATIONS

16.1 While formulating the Eco Park proposal, due and careful regard has been given to the ecological sensitivity of the site, as well as the concerns repeatedly emphasized by the Hon'ble National Green Tribunal, Southern Zone, Chennai. It is respectfully submitted that converting the entire extent of 118 acres into a permanent water body is neither environmentally optimal nor scientifically advisable, for the following reasons:

- Large artificial water bodies without assured and continuous inflow and outflow mechanisms are inherently prone to stagnation and eutrophication, thereby creating conditions conducive to mosquito breeding and associated public health risks.

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- The natural hydrology of the site, as per preliminary hydrological assessments indicate that the natural characteristics of the site are better suited for seasonal wetlands, retention basins, and interconnected water bodies, rather than a single, uniform expanse of water.

- Exclusive development of the site as a water body would severely curtail opportunities for terrestrial biodiversity conservation and substantially restrict public access and recreational use, thereby defeating the broader objectives of ecological balance and public welfare.

- Additionally, it is respectfully submitted that the subject land is situated in close proximity to Chennai International Airport, and therefore aviation safety considerations assume critical importance. As per the Guidance on Wildlife Hazard Management issued by the Director General of Civil Aviation (DGCA) vide Circular No. AD AC 06 of 2017 dated 04.08.2017, the presence of wildlife—particularly birds—on and in the vicinity of an aerodrome poses a serious threat to aircraft operational safety. The said circular categorically emphasizes that airports and their surrounding areas tend to attract wildlife primarily due to the availability of food, water, and shelter, and expressly identifies lakes, ponds, reservoirs, swamps, open terrains, grasslands, trees, shrubs, buildings, gutters, warm paved or roof surfaces, and artificial lighting that attracts insects as typical wildlife attractants.

In this context, it is humbly submitted that any large-scale creation or expansion of permanent water bodies within the subject land, located in the immediate influence zone

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of Chennai International Airport, would substantially increase the congregation of birds, thereby elevating the risk of bird strikes, endangering aircraft operations, passenger safety, and airport functionality. Such a situation would result in serious operational difficulties and would be contrary to the mandatory aviation safety norms and regulatory framework prescribed by the DGCA.

PROPOSED BLUE–GREEN PARK MODEL

16.2 In light of the above ecological, hydrological, and aviation safety considerations, the Department has proposed a scientifically balanced "Blue–Green Park" model, wherein:

- Eco Park has been conceptualised as an integrated Blue–Green infrastructure model, ensuring a harmonious balance between water management and green space development. Under this model, approximately 30–40% of the total land area will be earmarked for interconnected lakes, seasonal wetlands, recharge ponds, and storm-water detention basins, specifically designed to facilitate flood mitigation and groundwater recharge.

- The remaining 60–70% of the land is proposed to be developed as green infrastructure, comprising rain gardens, bio-swales, tree groves, thematic gardens, and open meadows. These components are intended to reduce urban heat island effects, enhance carbon sequestration, and function as a climate-resilient urban landscape.

- Existing ponds and natural depressions within the site will be preserved, restored, and ecologically enhanced through the introduction of native

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wetland vegetation, thereby improving their hydrological efficiency and ecological functionality.

This integrated approach ensures that the site effectively operates as a natural sponge during monsoon rains, absorbing and regulating storm-water flows, while simultaneously providing substantial and accessible green space for the residents of Chennai, thereby advancing environmental sustainability and public welfare.

FUNCTIONAL AND SOCIAL BENEFITS

16.3 The proposed Eco Park offers multiple tangible benefits, including:

1. **Flood Mitigation :** Engineered wetlands and retention ponds will safely store excess storm water, reducing downstream flooding risks.
2. **Groundwater Recharge:** Percolation zones will recharge the aquifer, improving ground water table.
3. **Biodiversity:** Combination of aquatic and terrestrial habitats will support native flora and fauna.
4. **Public Health & Recreation:** The Park will serve as a carbon sink in a city where the green cover is below WHO norms (8.75 sqm per capita vs. prescribed 9.5 sqm).

AVIATION SAFETY CONSIDERATIONS

16.4 It is further submitted that converting the entire area into a continuous wetland or water body would pose a serious aviation safety risk due to the likelihood of attracting migratory and resident bird species. The area naturally holds water only

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during monsoon months, remaining largely dry for the rest of the year. During this dry phase, the exposed land could become a breeding and foraging ground for high-risk bird species such as Red-wattled Lapwing (Vanellus indicus), Black Kite (Milvus migrans), and various egret species, thereby escalating the risk of bird strikes.

NEED FOR LARGE URBAN PARKS IN CHENNAI

16.5 It is humbly submitted that, when compared with other metropolitan cities in India, Chennai significantly lags behind in the availability of urban green spaces. Chennai, with a total city area of 426 sq. km (105,242 acres), has only 912 parks, whereas Hyderabad, with an area of 650 sq. km, has 1,579 parks; Bengaluru, with 741 sq. km, has 1,240 parks; Lucknow, with 631 sq. km, has 1,657 parks; and New Delhi, spread over 1,484 sq. km, has as many as 16,000 parks. Further, while other metropolitan cities are endowed with expansive urban parks such as KBR National Park in Hyderabad (390 acres), Lalbagh in Bengaluru (240 acres), Janeshwar Mishra Park in Lucknow (376 acres), and Yamuna Biodiversity Park in New Delhi (457 acres), Chennai is largely limited to Tholkappiar Poonga (358 acres) and Guindy National Park (670 acres), underscoring the relative inadequacy of large, accessible green spaces within the city.

16.6 It is further submitted that the Forest Survey of India Report, 2023, reveals that Delhi possesses the largest forest cover among metropolitan cities at 194.15 sq. km, followed by Mumbai (110.84 sq. km) and Bengaluru (89.61 sq. km). The report also indicates that while cities such as Ahmedabad have recorded the highest gain in forest cover (5.48 sq. km), followed by Bengaluru (0.59 sq. km), Chennai has experienced the maximum loss in forest cover (2.64 sq. km), with Hyderabad

recording the second-highest loss (1.61 sq. km). These findings clearly underscore the urgent and compelling necessity to augment green cover and develop sustainable park spaces in Chennai, both to function as a critical green lung for the city and to provide inclusive recreational spaces essential for public health, environmental balance, and overall urban well-being.

17. It is humbly submitted that, this Hon'ble Court in its order dated 07.07.2025 (mentioned below) has instructed the Water Resources Department to furnish Status Report pertaining to the subject land is extracted here in,

"7. The Water Resources Department is directed to specifically furnish details regarding the original extent of Velachery Lake as per the revenue records, as well as its present extent. Since a bathymetric survey has already been conducted, particulars relating to the lake's original water holding capacity, its current capacity, and the projected capacity following the implementation of the proposed measures—as outlined in the report submitted by the Additional Chief Secretary to the Government, Water Resources Department—shall also be provided. Let there be a specific mention as to ***how they are going to use the 118 Acres of land, which was taken possession from the Madras Race Club.***

8. The State of Tamil Nadu is also directed to ***submit a report explaining why the aforementioned 118 Acres of land should not be developed as a water body, rather than being utilized for public horticultural gardens, green spaces, and public utilities****. The conversion of this land into a water body would significantly enhance groundwater percolation and recharge, thereby contributing to meeting the water requirements of the city of Chennai. "*

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18. It is humbly submitted that, pursuant to the orders of the Hon'ble Supreme Court, the subject land is presently being developed as an Eco Park, which has since been inaugurated by the Hon'ble Chief Minister of Tamil Nadu and is now open to the general public. The Eco Park has been conceived and implemented with the primary objectives of storm-water storage, flood mitigation, biodiversity conservation, urban climate resilience, and promotion of public welfare in Guindy, Velachery, and the surrounding areas. In furtherance of these objectives, the Greater Chennai Corporation (GCC) has formed four ponds within the campus to store runoff generated from the catchment area and thereby mitigate flood risks.

19. In this regard, a multi-departmental meeting was convened on 19.08.2025, involving representatives from the Water Resources Department (WRD), Greater Chennai Corporation, Agriculture Department, and Housing Department, wherein specific instructions were issued to the Water Resources Department to furnish a technical opinion on the adequacy and effectiveness of the four water bodies created by GCC, based on field inspections and hydrological studies.

20. Accordingly, the Chief Engineer, Water Resources Department, Chennai Region, constituted a team of senior engineers and technical experts and directed them to conduct a detailed field inspection and submit a comprehensive report. The team comprised the following officials:

    a. The Superintending Engineer, Design Circle, Chennai;

    b. The Superintending Engineer, WRD, Palar Basin Circle, Chennai;

    c. The Deputy Director, Photo Geologist, Institute of Water Studies (IWS), Chennai; and

    d. The Executive Engineer, WRD, Lower Palar Basin Division, Kancheepuram.

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21. It is humbly submitted that the aforesaid team conducted a site inspection on 20.08.2025, following which detailed technical studies were undertaken by the Soil Mechanics and Research Division of the Water Resources Department and the Deputy Director, Photo Geologist, IWS, Chennai, specifically focusing on the lithological characteristics and watershed delineation of the Madras Race Course area. The findings of the said studies are set out hereunder.

GUINDY RACE COURSE – LITHOLGY:

Chennai city, the predominant geological formation comprises Alluvium consisting of sand, silt, and clay, except for limited exposures of crystalline Charnockite rocks in the south-western region. The Madras Race Course premises, situated in Guindy, fall within this south-western zone. The lithological profile of the site reveals a shallow layer of alluvium, underlain by a stratum of gravelly sand, followed by soft disintegrated rock and fractured rock, and subsequently massive hard rock formations. It was observed that the Greater Chennai Corporation (GCC) deployed earth-moving machinery (Poclain) to excavate ponds up to a depth of 4 to 5 metres, beyond which specialised rock-breaking equipment would be required due to the presence of hard rock strata.

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Team members site inspection

A trial pit excavated in bed of the excavated pond- 4

Soil and rock pieces collected from the trial pit

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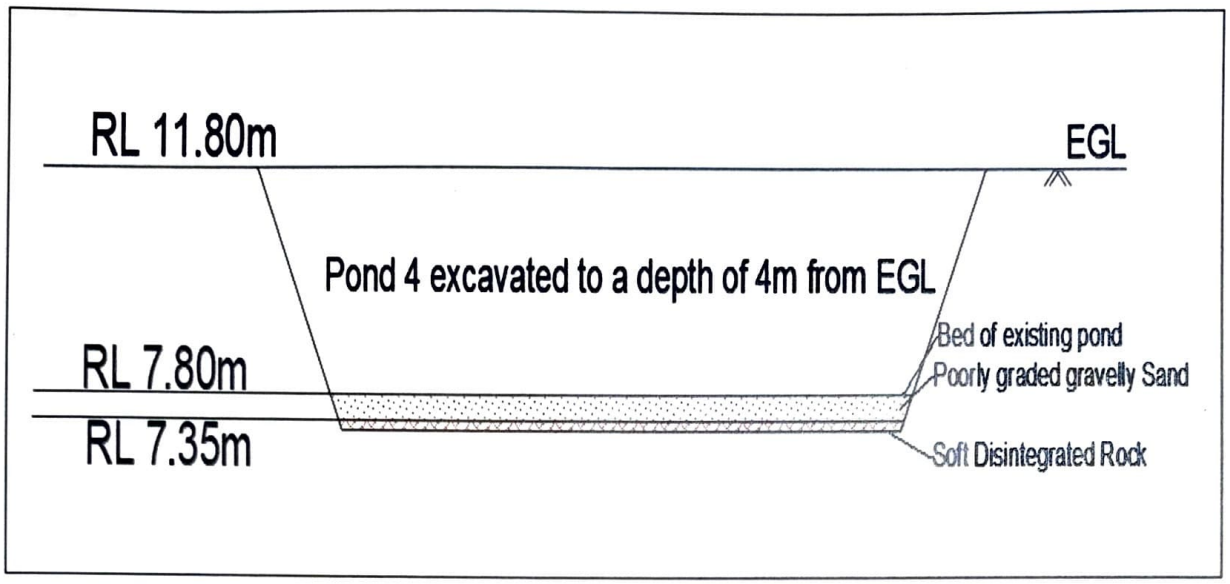

Details of excavated pond

ANALYSIS OF SOIL / SDR (SOFT DISINTEGRATED ROCK) SAMPLES:

During the site inspection, trial pits were excavated in the bed of Pond No. 4, and representative soil and rock samples were collected for laboratory analysis. The Soil Mechanics and Research Division of WRD conducted detailed tests on the collected soil and Soft Disintegrated Rock (SDR) samples.

- The soil sample collected at RL.7.8-7.35m indicates soil is of poorly graded Gravelly sand with percentage of sand and gravel as 59% and 24% respectively. The soil is non-plastic in nature.
- The specific gravity of the soil is 2.53.
- The coefficient of permeability of this soil is 7.16x10-5 indicating semi pervious nature of the soil.

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- The calcium carbonate content of the rock / soil sample ranges from 17.5% to 21.5%, indicating that the SDR/soil is highly calcareous soil.
- Both soil/SDR samples reacts vigorously with diluted HCl with strong effervescence confirming presence of carbonates.
- SDR samples show higher electrical conductivity, indicating that the collected SDR samples are water soluble and will disintegrate by the action of water slowly.
- The excavated four ponds have similar soil strata.
- Considering the similarity in the soil profiles it is concluded that the soil strata consist of shallow depth of Alluvium followed by a stratum of gravely sand followed by soft disintegrated rock - fractured rock and then massive hard rocks.

The analysis revealed that the soil collected at RL 7.80–7.35 metres is predominantly poorly graded gravelly sand, comprising approximately 59% sand and 24% gravel, and is non-plastic in nature. The specific gravity of the soil was determined as 2.53, while the coefficient of permeability (7.16×10^{-5}) indicates a semi-pervious character, which is favourable for controlled infiltration and groundwater recharge. The calcium carbonate content, ranging from 17.5% to 21.5%, confirms the soil and SDR to be highly calcareous, further corroborated by vigorous effervescence upon reaction with diluted hydrochloric acid. The SDR samples also exhibited higher electrical conductivity, indicating that the material is water-soluble and gradually disintegrates under prolonged water action. Notably, all four excavated ponds exhibit similar soil and rock profiles, confirming uniform subsurface conditions across the site.

It is therefore concluded that the soil strata across the Madras Race Course premises consistently consist of shallow alluvium, followed by gravelly sand, soft disintegrated

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and fractured rock, and massive hard rock, validating the scientific suitability of the site for engineered ponds and seasonal wetlands rather than a single continuous water body.

GUINDY RACE COURSE – WATERSHED DELINEATION

A watershed delineation study of the Guindy Race Course area was undertaken using high-resolution 2-metre Digital Elevation Model (DEM) data and ArcGIS Hydrology tools, including flow direction analysis, drainage delineation, pour-point identification, and catchment boundary mapping. The study established that the site is divided into three distinct sub-watersheds, namely:

a) Watershed-I, covering 125,467.44 sq. metres, draining northwards towards the Adyar River;

b) Watershed-II, covering 204,833.91 sq. metres, draining southwards into Velachery Lake through a canal; and

c) Watershed-III, covering 118,293.35 sq. metres, draining through the Guindy Reserved Forest into Velachery Lake.

Methodology:

- Used 2m resolution Digital Elevation Model (DEM) and ArcGIS Hydrology tools.
- Steps included determining flow direction, drainage delineation, locating pour points, and catchment delineation.

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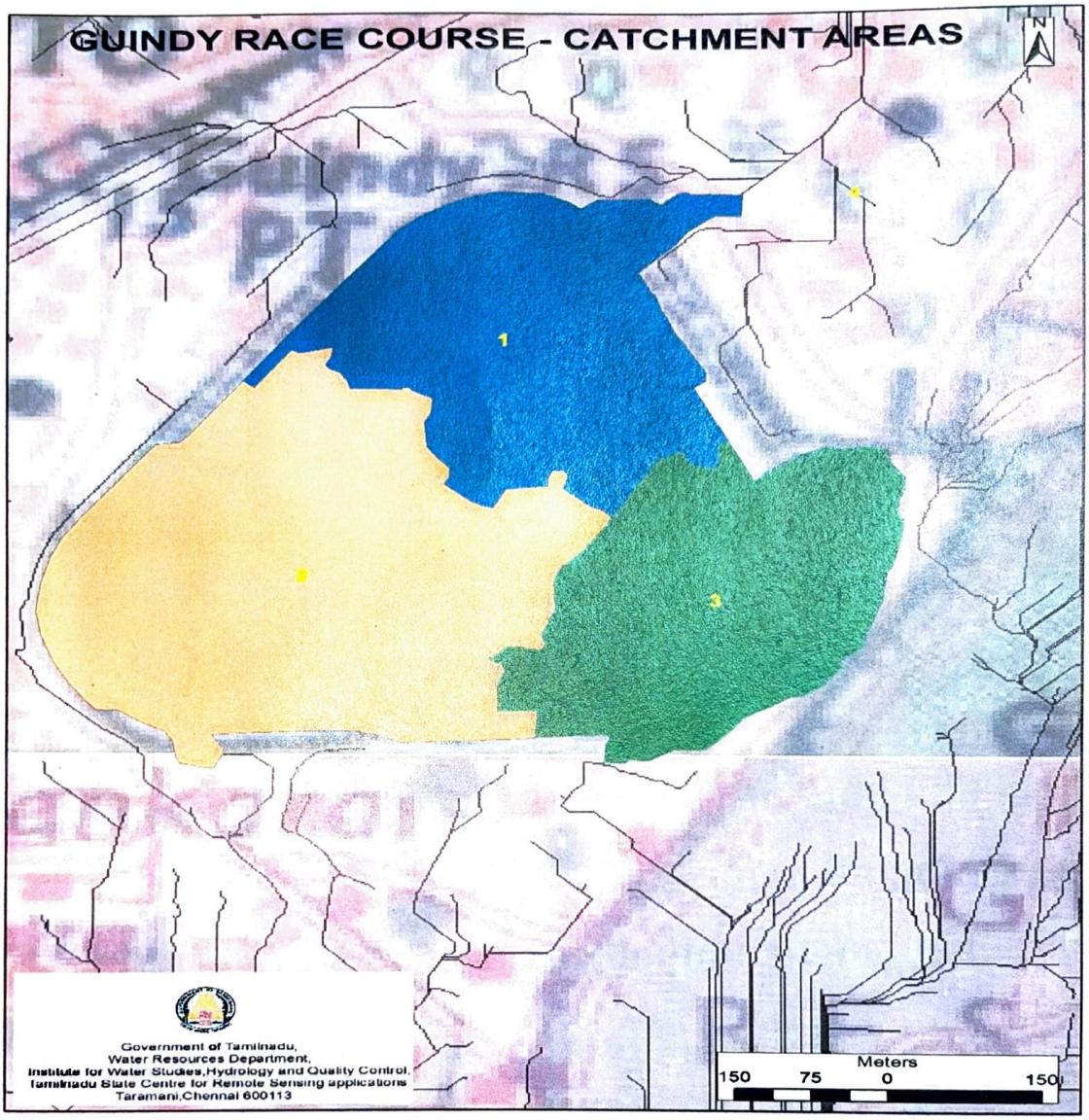

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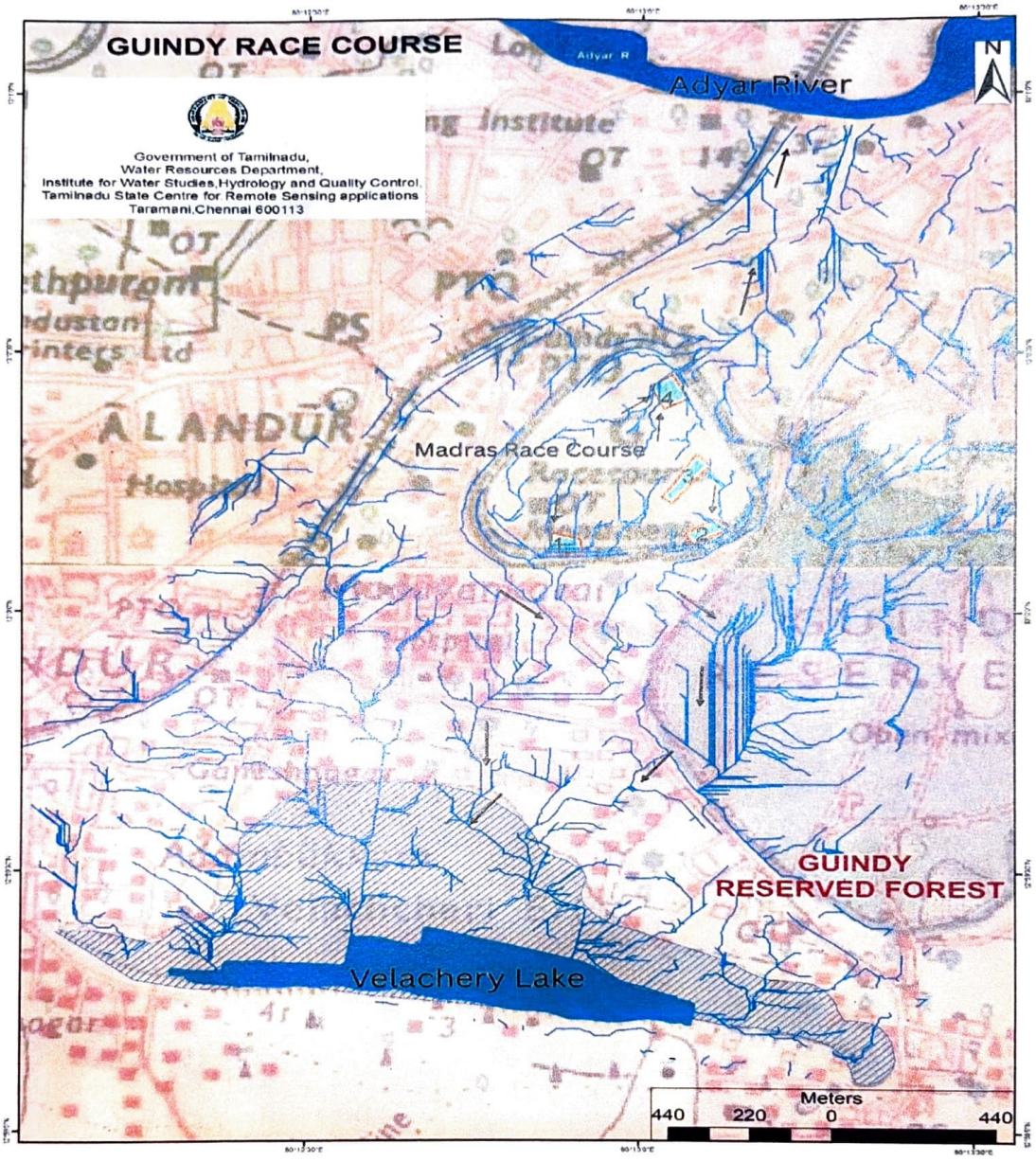

Watershed map of Velachery Lake

Yield Calculation:

The yield of a catchment refers to the total volume of water (usually measured over a year) that can be collected from a drainage basin or catchment and made available for various uses such as water supply, irrigation, or reservoir storage. Catchment yield is

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the total runoff generated from rainfall over a catchment area after deducting losses like evaporation, infiltration, and water use by vegetation.

Yield = C x A x P

Where,

- Rainfall-runoff method used with **C** (runoff coefficient) = 0.15 for plain area.
- A – Area of catchment
- P – Precipitation - 75% dependable rainfall (9-year IMD data from Meenambakkam station (2016-2024): 1196.33 mm.
- Calculated yields for Watersheds I, II, III: 0.0225, 0.0367, 0.0212 MCM respectively (**Total: 0.0804 MCM or 2.84 Mcft**).
- The total yield realized from the watersheds of Madras Race Course was approximately 3.86 Mcft, based on the 2023 floods corresponding to a rainfall of 1624 mm, and there will be a buffer available with the existing capacity that is about 67% more than the yield of 2.84 Mcft calculated above.

Based on the above findings and in compliance with the directions of the Hon'ble National Green Tribunal to enhance storage capacity, it is submitted that the combined capacity of the four existing ponds is 8.66 Mcft, with a water spread area of 49,072.59 sq. metres (12.13 acres). This capacity is more than adequate to accommodate the runoff from the catchment area, thereby effectively reducing flood inflows into Velachery Lake and the Adyar River.

It is also submitted that, subsequent to the above the impacts and the remedial measure proposed by the Water Resources Department for Flood Mitigation is also furnished.

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IMPACTS

i. The residential areas located in velachery in and around the Pallikaranai swamp are located in the ground level of (+)2.50 m to (+)3.00m which is much lesser than the swamp HFL of (+)3.750m based on 2015 floods.

ii. Palikaranai swamp flushes out the flood water through Okkiyam maduvu linked to Buckingham canal and drains into sea at Muttukadu mouth near Kovalam after flowing for 18 km.

iii. At present, the Restoration and Rejuvenation of Okkiyam maduvu and straight cut to sea from South B canal near uthandi works are in progress and this will reduce the flood level of the Pallikaranai swamp from the existing (+)3.750 m to (+)2.500 m by increasing the flood discharge capacity through straight cut flood escape canal from the Buckingham canal to sea and hence, the inundation of the velachery and surrounding areas will be reduced to a greater extent.

It is humbly submitted that, considering the above impacts the following interpretation are herewith furnished which is pertaining to the involvements of Water Resource Department in the said case herein,

a. the existing 8.66 Mcft pond capacity is more than sufficient to manage the calculated catchment yield of 2.84 Mcft;
b. an additional buffer storage of 5.82 Mcft (67%) provides enhanced flood resilience; and
c. the Chennai Metropolitan Development Authority (CMDA) has also proposed the development of 10 lakes within the Chennai Metropolitan Area, including Perumbakkam, Madambakkam, Sembakkam, Velachery,

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and Adambakkam tanks, which will further augment regional water storage and flood moderation.

For these reasons, it is humbly submitted that conversion of the entire land parcel into a single water body would neither yield optimal ecological outcomes nor serve public interest. On the contrary, a scientifically designed Eco Park integrating water bodies with green landscapes effectively fulfils the objectives of flood mitigation, biodiversity conservation, urban climate resilience, and public welfare. The said Eco Park has already been inaugurated by the Hon'ble Chief Minister and is presently functional for public benefit.

It is further submitted that the findings emerging from the technical, ecological, hydrological and aviation-safety related reports collectively demonstrate the far-reaching and multi-dimensional impacts of land-use decisions in the subject area, particularly given its sensitive urban and strategic context.

From a hydrological and flood-management perspective, the reports clearly establish that Chennai has repeatedly suffered severe flooding due to unplanned urbanisation, loss of natural drainage, and inadequate water retention capacity. The studies undertaken by the Water Resources Department and allied technical agencies reveal that the subject land forms part of an interconnected watershed system draining towards Velachery Lake, Pallikaranai swamp, the Adyar River and downstream channels. The creation and strengthening of multiple ponds with a combined capacity far exceeding the estimated catchment yield ensures the availability of substantial buffer storage. This buffer plays a decisive role in attenuating peak runoff during extreme rainfall events, thereby reducing inundation in low-lying residential areas such as Velachery, Madipakkam, Adambakkam and adjoining localities. The impact of these interventions is not merely local but city-wide, as they complement ongoing macro-drainage projects

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like the restoration of Okkiyam Maduvu and flood-escape channels, together forming a resilient flood-mitigation network.

From an ecological and environmental standpoint, the reports caution against the creation of large, continuous artificial water bodies without regulated inflow and outflow, as such features are prone to stagnation, eutrophication, and mosquito breeding, thereby posing public health risks. The soil and lithology analysis indicates semi-pervious gravelly sand and soft disintegrated rock strata, which are ideally suited for seasonal wetlands, recharge ponds and bio-retention systems rather than permanent deep reservoirs. A mixed blue-green landscape enables both surface storage and gradual percolation, supporting groundwater recharge while preserving ecological balance. Importantly, such a design allows coexistence of aquatic and terrestrial habitats, promoting native biodiversity while also ensuring human accessibility for recreation, education and wellbeing.

The aviation safety implications, as highlighted in wildlife hazard management guidelines and supported by empirical studies on bird - aircraft strikes, assume critical importance in the present case due to the proximity of Chennai International Airport. Airports located near extensive open water bodies, wetlands and uncontrolled green patches are known to attract resident and migratory birds, significantly increasing the risk of bird strikes during take-off and landing phases, which are the most vulnerable stages of flight. The reports underscore that bird strikes are not hypothetical concerns but documented hazards that have caused loss of life, aircraft damage, operational disruptions and substantial economic losses worldwide. Transforming the entire subject land into a single or dominant water body would materially elevate this risk, potentially violating aviation safety norms and creating operational constraints for one of the country's busiest airports. The proposed Eco Park model, by limiting water spread to scientifically designed retention ponds interspersed with managed green spaces, mitigates this risk while remaining compliant with aviation safety requirements.

From a public health and climate resilience perspective, the impacts are equally significant. Chennai continues to record declining green cover and rising air pollution levels, exacerbating urban heat island effects and respiratory health risks. The Eco Park, as envisaged in the reports and judicial findings, functions as a critical urban "green lung", improving ambient air quality, moderating temperatures, and enhancing overall liveability. The integration of tree cover, rain gardens, bioswales and open green spaces contributes directly to carbon sequestration, micro-climate regulation and mental and physical health benefits for the population.

Finally, from a social and economic standpoint, the reports highlight that such integrated eco-infrastructure serves broader public interest by preventing recurring disaster-related losses, reducing expenditure on post-flood relief, safeguarding life and property, and creating inclusive public spaces that promote tourism, recreation and environmental awareness. The cumulative impact of these measures is preventive rather than reactive, long-term rather than ad-hoc, and inclusive rather than exclusionary.

In sum, the reports conclusively demonstrate that a scientifically designed Eco Park integrating flood-control infrastructure, managed water bodies, green landscapes and aviation-safety considerations yields optimal ecological, social, economic and safety outcomes. Any alternative approach - particularly the conversion of the entire land into a single water body - would undermine these objectives, create new risks, and fail to deliver balanced public benefits. The present model therefore represents a reasoned, evidence-based response to Chennai's pressing challenges of flooding, environmental degradation, public health stress, and urban resilience.

It is therefore prayed that this Status Report may graciously be taken on record in the present Original Application and that this Hon'ble Tribunal may be pleased to pass such further orders as deemed fit and proper in the facts and circumstances of the case, thereby rendering justice.

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VERIFICATION

I, I, R.ARUNMOZHI S/o RAJU, Executive Engineer, Water Resources Department (WRD), Lower Palar Basin Division, Kanchipuram do verify that the submissions made in above paragraphs are true to the best of my knowledge and from records and I verify this at Chennai on Day of December, 2025

Verified at Chennai on this the day .....22th.....of December, 2025.

Executive Engineer W.R.D
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