# BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI

Original Application No. 570 of 2016 (New)
Original Application No. 288 of 2016 (Old)

# IN THE MATTER OF:

M/s. ANJLI INFRA HOUSING LLP

**APPLICANT** 

Versus

UNION OF INDIA & ORS.

RESPONDENTS

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# REPORT OF THE CHAIRMAN, EXPERT COMMITTEE CONSTITUTED BY THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI IN THE MATTER OF S.P.MUTHURAMAN VS UNION OF INDIA & OTHERS O.A NO. 37/2015

FEBRUARY, 2017

#### REPORT OF THE CHAIRMAN, EXPERT COMMITTEE

The Hon'ble National Green Tribunal (NGT), Principal Bench, vide its order dated 07.07.2015 and 01.9.2015 in O.A. No. 37 of 2015 in the matter of S.P. Muthuraman Vs. Union of India and Others constituted a Committee to inspect the six Projects in question i.e. (i) M/s. Y. Pondurai, (ii) Ruby Manoharan Property Developers Pvt. Ltd., (iii) M/s. Jones Foundations Pvt. Ltd., (iv) M/s. SAS Realtors Pvt. Ltd., (v) M/s. Dugar Housing Ltd. and (vi) M/s. SPR and RG Construction Pvt. Ltd.

Further, the Hon'ble National Green Tribunal vide its following orders directed the Committee to also inspect the following projects and submit comprehensive reports:

- Orders dated 12.07.2016 in O.A. No. 288 of 2016 in the matter of M/s Anjli
   Infra Housing LLP V/s Union of India & Others.
- Orders dated 18.07.2016 in O.A No.303 of 2016 in the matter of M/s Ankur
   Khusal Construction LLP V/s Union of India &Others.
- Orders dated 19.12.2016 in O.A. No. 467 of 2016 in the matter of M/s
   Appaswamy Real Estates Pvt. Ltd V/s The State Environment Impact
   Assessment Authority & Others.
- Orders dated 19.12.2016 in O.A. No 468 of 2016 in the matter of M/s

  Ambattur Reality Private Limited V/s The State Environment Impact

  Assessment Authority & Others.
- Orders dated 21.09.2016 in O.A. No 308 of 2016 in the matter of M/s ETA Properties and Investment Private Limited V/s Union of India & Others.
- Orders dated 02.08.2016 in O.A. No 310 of 2016 in the matter of M/s Shivani
   Constructions V/s Union of India &Others.

Orders dated 02.08.2016 in O.A. No. 311 of 2016 in the matter of M/s. VGN
 Builder Private Limited V/s. Union of India & others.

#### ISSUES COVERED IN THE REPORT

The Hon'ble Tribunal had specifically directed report on the following issues:

- Illegal and unauthorized acts and activities carried out by the Respondents.
- Ecological and environmental damage done by these projects.
- Installation of STPs.
- Other anti-pollution devices by the Project Proponent.
- Proposed point of discharge of sewage and any other untreated waste.
- Source of water during operation phase and otherwise.
- Use of energy efficient devices.
- Ecologically and environmentally sensitive areas.
- Details of alteration of land its effect on the natural topography.
- Effect on natural drainage system.
- Adequacy of rainwater harvesting system.
- Adequacy of parking area and if at all they have been provided.
- Collection and disposal of municipal solid waste at the project site.
- Compliance of conditions stated in the planning permission and other permissions granted by various authorities.
- Adequacy of suggestions made by the SEIAA in its meetings to address concerns regarding environment and ecology.
- Whether demolition or raising of additional structures are required in the interest of environment and ecology.

#### Findings

The observation of the Committee includes the following;

> Illegal and unauthorized acts and activities carried out by the Respondents.

The following illegal acts and activities by the Project Proponent have been noted by the Committee:

- Initiated construction at the site without obtaining Environmental Clearance under section 2 of the EIA Notification dated 14.09.2006 issued under section 5(3) of Environment (Protection) Rules, 1986 from SEIAA, Tamil Nadu.
- Violated condition of obtaining EC before starting construction at site as envisaged in the conditions stipulated by CMDA(in many cases).
- Did not obtain 'Consent to Establish' required for commencement of work
   from Tamil Nadu Pollution Control Board.

#### Clearances:

- The Committee found that construction work at all the 13 sites have been initiated without obtaining the Environmental Clearance from SEIAA, Tamil Nadu and Consent to Establish from Tamil Nadu State Pollution Control Board.
- Apart from not obtaining the requisite Environmental Clearance and Consent to Establish, the proponents have by and large obtained all other clearance required indicating that the proponents did not give due consideration to environmental aspects, which is the reflective of the mind-set.

# Clearances granted without ensuring capacity to cater to additional load:

- The concerned authorities while granting permission/ clearances for the projects did not ensure the capacity of the related infrastructure to take the imminent additional load due to water demand, generation of sewage, solid waste generation, increase in traffic, etc, due to these projects. This may be true of very large number of cases, apart from the projects inspected.
- In case of M/s. Shivani Constructions, the Local Village Panchayat has given permission for providing water supply, management of solid waste and use of excess sewage. The Committee does not have any reason to believe in the capacity of the village Panchayat to manage the excess sewage and solid waste. The local body has granted permission without conducting any study on the availability of land for Avenue Plantation and impact of the abstraction of ground water on the water table and quality of water. Any exploitation of ground water quality beyond the recharging rate has all probability of sea water ingression thereby increasing the TDS level.
- The construction at the sites is consistent with the land use plan as specified in the Master Plan 2008 and in line with the Planning Permission as observed during the visit of the committee and as confirmed by CMDA.

#### Impact on the water table:

In many cases the construction has been carried out below the water table,
 which has every probability of impacting the hydrogeology of the area. No study was got done by the concerned authorities before according permission/clearance for construction.

The approach of the permission Granting Authorities does not ensure proper development. The approach has been letting large dwelling units come up without necessary development of infrastructure. Presently there is a wide mismatch between the infrastructure required and infrastructure available.

#### Water Supply:

- Water during the construction phase is/ was supplied through tankers at the sites. In the operational phase M/s Y. Pondurai,M/s Jones Foundation Pvt. Ltd., M/s SAS Realtors Pvt. Ltd., M/s Dugar Housing Ltd., M/s SPR & RG Constructions Pvt. Ltd., M/s Anjli Infra Housing LLP, M/s Ankur Khusal Construction LLP, M/s Ambattur Reality Private Limited, M/s ETA Properties and Investment Private Limited andM/s. VGN Builder Private Limited propose to source their water supply from CMWSSB supplies. The water supply line from CMWSSB to project site is still to be operationalized. M/s Appaswamy Real Estate Private Limited has proposed to use ground water supplies (as per EIA report) for which no permission is obtained. M/s Ruby Manoharan Property Developers Pvt. Ltd. has proposed to meet the water supply requirement from the wells within its premises, the permission for which is still awaited. The local village panchayat has agreed to provide water @ 250KLD to M/s Shivani Construction.
- The Committee observed that no satisfactory arrangement has been made by the Project Proponents for ensuring quality potable water supply.
- No assured water supply is available at any of the site and the Proponents
  except for M/s Shivani Construction & M/s Ruby Manoharan Property
  Developers Pvt. Ltd. propose to meet the requirement by tanker water supply.

The Committee feels that this option is not feasible and may lead to ground water abstraction. Abstraction of ground water beyond the recharging rate has every possibility of sea water ingression thereby increasing the TDS levels in the water. Thus, it is imperative to monitor the ground water level and the water quality by accredited third party or Central Ground Water Board.

#### Sewage:

- The sewage management in STPs is inadequate in all cases.
- The sewage treatment plant designed are likely to meet the standards prescribed by CMWSSB of BOD- 20 mg/l and SS- 30 mg/l, but seem inadequate to meet the norms of bathing water quality i.e. BOD < 3.0 mg/l specified by the SEIAA.
- The Committee observed that the general practice is to provide STPs underground, which may cause many problems like accumulation of gases, flooding during rainy season, etc. The STPs preferably should be constructed above the ground to have easy access to the plant, visibility of the operations and to ensure effective performance.
- The extra quantity of treated sewage is proposed to be discharged to CMWSSB sewerage system by M/s Y. Pondurai, M/s Jones Foundation Pvt. Ltd., M/s SAS Realtors Pvt. Ltd., M/s Dugar Housing Ltd., M/s SPR & RG Constructions Pvt. Ltd., M/s Anjli Infra Housing LLP, M/s Ankur Khusal Construction LLP, M/s Ambattur Reality Private Limited, M/s ETA Properties and Investment Private Limited andM/s. VGN Builder Private Limited. CMWSSB has made no firm commitment for connectivity, which is yet to be obtained. The excess treated sewage in case of M/s Shivani Constructions will be used for irrigation on Panchayat land (Avenue plantation) for which

neither details of land available nor conveyance system was provided. M/s Appaswamy Real Estates Pvt Ltd has proposed (as per EIA report) to use the excess treated sewage for avenue plantation for which neither approval nor details of the land have been provided. The excess sewage in case of M/s Ruby Manoharan Property Developers Pvt. Ltd. is to be used for Avenue Plantation for which neither conveyance system has been provided nor were details of available land provided. The sewage generated from the EWS block constructed by M/s VGN Builder Pvt. Ltd as part of its main project is treated in septic tank and disposed through soak pit.

- The arrangements made with respect to reuse of treated sewage beyond flushing was found to be inadequate in all cases by the Committee.
- No provision for recycling/reuse of treated sewage was seen at the project sites of M/s ETA Properties and Investment Private Limited, M/s Shivani Constructions, M/s. VGN Builder Private Limited, M/s SAS Realtors Pvt. Ltd. M/s Anjli Infra Housing LLP and M/s Ankur Khusal Construction LLP. The arrangement for reuse and recycling of treated sewage at all the other sites needs to be improved and verified during actual operation.
- The sewage treatment plant created by M/s. Y. Pondurai, M/s SAS Realtors and M/s Ruby Manoharan Property Developers Pvt. Ltd., M/s Anjali Infra Housing LLP, M/s ETA Properties and Investment Private Limited, M/s Shivani Constructions, M/s Appaswamy Real Estates Pvt Ltd and M/s Ambattur Reality Private Limited does not have proper headroom and or safe access to the units for proper operation and maintenance. The STPs need to be demolished /modified for providing adequate space for safe accessibility to

- all the units and other O&M. The plant design in most cases seems inadequate to meet the norms, prescribed by SEIAA.
- The STP at M/s Jones Foundation Pvt. Ltd. though operational is not attached with Activated Carbon and Sand Filter units and is inadequate to meet the norms prescribed by SEIAA. The STP at M/s SPR&RG Construction Pvt. Ltd. and M/s VGN Builders Pvt. Ltd. under installation needs up-gradation to meet the norms prescribed by SEIAA. The STP at M/s Dugar Housing Ltd. is still to be constructed but needs redesigning to meet the requirement for treatment of additional sewage and the norms prescribed by SEIAA.
- In case of M/s Ankur Khusal Construction LLP, 02 separate sewage treatment
  plants one for each block with treatment capacity of 100 KLD and 50 KLD,
  respectively are proposed. The proponent informed to revisit the proposal and
  instead provide one sewage treatment plant with treatment capacity of 150
  KLD.
- In case of M/s Ruby ManoharanProperty Pvt Ltd., M/s Shivani Constructions and M/s Appaswamy Real Estates Pvt Ltd. (as per E/A Report) where the excess sewage is proposed to be used for Avenue Plantation, no land details were provided nor is any conveyance system for transportation of the sewage in place. No provision for storage of treated sewage during the rainy season has been made, when demand for water for irrigation will not be there.
- All other proponents have proposed to discharge excess sewage to the CMWSSB sewerage system for which no connectivity has been provided and in some cases there is no sewerage system available nearby.
- In the operational period during in which connectivity with the CMWSSB sewage system is not established, excess sewage is proposed to be

transported by proponents through tankers to the nearby STPs. Such an arrangement needs to ensure the following which presently does not exist/ or are not available.

- Proper storage of the treated effluent, suitably located/ properly designed hygienic arrangement for transferring sewage into tankers, and tankers fitted with GPS to ensure that the sewage is disposed at the STPs only.
- Permission from CMWSSB for disposal of excess treated sewage at STPs
- Availability of additional free capacity at STPs and the quality of treated effluent presently discharged by STPs
- The discharge of treated excess sewage to CMWSSB sewerage system, where in it gets mixed with the raw sewage, defeats the purpose of treatment. Such a system has all probability of discharge of untreated sewage from these building projects.
- The utilisation of the treated sewage to the maximum possible needs to be emphasised.
- The discharge of excess treated sewage by tankers at the inlet to the STPs of CMWSSB will only help in dilution of the sewage received.

#### Green Belt:

• The Green belt has not been developed properly by any of the proponents.
The Green Belt developed is inadequate in all the cases and the Committee feels that the available green belt seems to be a transitionary arrangement in most cases and in the long run the area earmarked for Green Belt may be redesignated for some other activity.

#### **Energy Efficiency:**

- M/s SAS Realtors Pvt. Ltd. has installed solar panels to meet the hot water requirement. M/s Jones Foundation Pvt. Ltd. proposes to install solar panels for lighting requirement, M/s Ankur Khusal Construction LLP has proposed to install solar street lights to meet the lighting requirement of common place while M/s Anjli Infra Housing LLP proposes to install Sunshades and sun control lining glass to reduce the heating load. M/s ETA Properties and Investment Private Limited, M/s Shivani Constructions, M/s. VGN Builder Private Limited have proposed to install LED/ CFL and VVVF/ ACVVF drive lifts, but details could not be seen while the other proponents have not made any effort.
- Adequate arrangements for energy efficiency in line with ECBC need to be ensured in all cases.
- During discussions all the project proponents informed to include the energy efficiency system in their electrification programme which can be verified only during operational phase of the project.

#### Solid Waste Management:

 The Committee was not happy with the provisions made for solid waste management. No arrangement for solid waste management is in place at all the sites and the arrangements proposed for solid waste management in all the cases seem inadequate.

#### Parking Requirement:

• The parking area requirement at all the projects as proposed seems adequate considering the norms specified by CMDA/ SEIAA except at M/s Y. Pondurai and M/s Dugar Housing Ltd. which is inadequate, considering the norms specified by SEIAA.

#### Rain Water Harvesting:

No proper rain water harvesting structure is provided in the case of M/s Y. Pondurai. At M/s Ruby Manoharan Properties Pvt. Ltd. and M/s Jones Foundation Pvt Ltd, provision has been made for roof top rain water harvesting recharging of surface water runoff. No provision for roof-top rain water harvesting has been made in the case of M/s SAS Realtors Pvt Ltd. In case of M/s Dugar Housing Limited rain water harvesting structures are not seen during the site inspection as the site is under construction and no adequate rain water harvesting mechanism is seen in M/s SPR&RG Constructions Pvt. Ltd. Rainwater harvesting structures are inadequate in the cases of M/s Anjli Infra Housing LLP, M/s Ankur Kushal Construction LLP, M/s Appaswamy Real Estates Pvt Ltd, M/s Ambattur Reality Pvt Ltd, M/s ETA Properties and Investment Private Limited, M/s Shivani Constructions and M/s. VGN Builders Private Limited seems inadequate.

#### **Traffic Management:**

In the case of in M/s SPR&RG Constructions Pvt Ltd There are 03 entry roads, besides the proposed highway through the site. The entry roads being narrow, till such time the proposed highway is constructed, there is possibility of traffic congestion for which traffic management plan is required to be developed and implemented. In the case Y.Pondurai the vehicles entering or leaving the site can be a source of traffic congestion, the site being close to the main road. In the case of M/s Jones Foundation Pvt Ltd the entry road leading to the site being single lane, can be a cause of congestion, and may lead to increase in noise levels and air pollution and could be a cause of concern to the neighbourhood. The sites of M/s Ruby Manoharan Properties Pvt Ltd ,M/s Dugar Housing Limited, M/s SAS Realtors Pvt Ltd ,M/s Anjli Infra Housing LLP, M/s Ankur Kushal Construction LLP, M/s ETA Properties and Investment Private Limited, M/s Appaswamy Real Estates Pvt Ltd and M/s Ambattur Reality Pvt Ltd being adjacent to the main road, there is every possibility of traffic congestion during morning and evening peak hours for which traffic management plan is required to be developed and implemented. In the case of M/s Shivani Constructions and M/s. VGN Builders Private Limited also, the Connecting roads not being wide there is possibility of traffic congestion during morning and evening peak hours for which traffic management plan is required to be developed and implemented.

### Alteration of Land and impact on natural drainage:

 Land has been levelled in all cases and in some cases, the level has been raised by about 1.5 meters. No flooding was seen during visits. However, the impact on natural drainage will need to be observed during operational phase.

#### Environmental Damage:

The Building projects are a living systems and the main damage to the environment is expected during the operational phase of these projects arising due to ineffective management of domestic sewage, solid waste conservation of resources, traffic congestion, etc. The activities impacting the environment during the construction and operation phase of the project are attached as Annexure-I.

#### Suggestions/Recommendations:

- A systematic green belt development is necessary. In all future projects environmental issues like development of green belt, management of surface water runoff, its collection and recharge etc., provision of solid waste management, and orientation of the building for energy saving should be given priority while designing the layout taking into account the number of dwelling units likely to come up.
- The SEIAA conditions should be more specific with regard to energy saving,
   rain water harvesting, use of renewable energy, and green belt development
   for effective implementation and monitoring.
- The general practice is to provide STPs underground, which may cause problems like accumulation of gases, flooding during rainy season, etc. The STPs preferably should be constructed above the ground to have easy access to the plant, usability of operation to ensure effective performance and dispersion of gases.
- To ensure optimal performance of sewage treatment plant and management of solid waste, provision of performance guarantee need to be introduced, so

that the infrastructure established meets the prescribed norms for atleast 5-10 years.

- The Committee observed that all the project proponents have initiated the construction activities only after obtaining building permission but without obtaining Environment Clearance (EC). The Committee feels that building permission to all such projects requiring Environmental Clearance be granted only after issuance of Environmental Clearance. Such arrangement will ensure better compliance of EIA Notification, 2006.
- To ensure that entire waste water generated is treated, online flow measurement system need to be installed both at the Inlet and Outlet of the STPs, and the pumps/ valves integrated through software to provide the flow data
- The online effluent monitoring system should be installed to monitor the effluent quality at least for the basic parameters, such as pH, suspended solids and BOD for self-monitoring and self-regulations besides ensuring compliance of the norms. The data should be transferred to SPCBs directly from the analysers.
- be transparent and online wherever, possible. For bringing transparency in the process of granting permissions the procedure needs to be further streamlined and check list prepared and placed on website. Coordination amongst the concerned Departments need to be ensured. Environmental Clearance should be integrated with building permission to ensure that construction activity is not started without obtaining Environmental clearance.

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There is a need for due priority to the management of solid waste and sewage, use

of solar energy and rain water harvesting. There is a need for categorisation of

buildings and construction projects based on their size and land use. The issues of

solid waste management, treatment of sewage, rainwater harvesting, green belt

development need to be mandated in a manner so that, the environmental objectives

are met. In order to ensure that the Building Permissions are granted by the local

authorities only with due Environmental considerations, there is a need to integrate

the environmental concerns in the Building Permissions itself.

To ensure that the environmental issues are properly attended, the developer should

be responsible for operating the environmental facilities including STP, management

of MSW, rainwater harvesting, etc. till such time the system stabilises. A mechanism

needs to be put in place to ensure that the facilities created for treatment of sewage,

solid waste management, rain water harvesting, etc. are sustainable in the long run.

Shr A.K. Mehta, I.A.S)

Joint Secretary, MoEF&CC, Govt. of India

& Chairman Expert Committee

#### Annexure- I

# **ENVIRONMENTAL DAMAGE BY CONSTRUCTION PROJECT**

Any project big or small, infrastructure or Industrial will have environmental impacts both during the construction and operational phases. The magnitude of the impact will vary from project to project depending upon the project size, nature, location, meteorological conditions, processes involved, raw material used and fuel consumption, etc. The factors impacting the environment are different during the construction phase and the operational phase. Factors that may be impacting the environment during construction phase or the operational phase are detailed in Table - I. The impact weighting of these factors will vary from project to project and will be governed by various factors:-

In the projects inspected by the Committee, the following factors may influence the impact on environment during construction phase.

- 1. Construction below ground water table.
- 2. Changing topography/slope of the project site.
- 3. Changing /diverting course of natural drainage.
- 4. Dust/Particulate matter emissions from loading /unloading of building material and construction activities.
- 5. Pollution caused by vehicles transporting building material
- 6. Burning of wood and others biomass by labours.
- 7. Loss of top soil in the construction area and the loss of moisture content.
- 8. Loss of area for ground water recharging (due to loss of area used for construction and paving of the areas)

- 9. Disposal of C&D Waste in places other than the designated places.
- 10. Disposal of paint residue and containers.

During operational phase, key factors that may lead to adverse environmental impact may include the following:

- 1. Absence/ improper sewage treatment and its disposal
- 2. Improper solid waste management
- 3. Over exploitation of ground water
- 4. Increased pollution levels due to traffic congestion
- 5. Sea water ingression in coastal areas
- 6. Adverse changes in ground water recharge pattern

In case of projects under reference, the adverse impacts are mainly required to be monitored during operational phase, since otherwise they are consistent with designated land use.

⊞a ⊞a	FACTORS/ACTIVITIES IMPACTING ENVIRONMENT	TAKEN
Comst	↓ Construction Phase	Operational Phase
Ł	→ Loss of Tap Soil cover	- Disposal of acreage
<u> </u>	Change in Natural Topography  Slope - Flooding on the roads/natural slope sides in case of change in slope  Flooding	Ground water/ surface water contamination     Soil contamination     Odour
	<ul> <li>Filling of the area to raise R.L obstruction to the natural free flow</li> <li>Change in permeability co-efficient thereby impecting</li> <li>ground water recharge and change in time of concentration, leading to flooding</li> </ul>	O Unacethetic appearance O Vehicular pollution (if transported by tanker) and ground water/ soil contamination
<u>†</u>	Construction below Ground Water Table	and other issues assessing due to unsufficient developing  O Added load on STP disposal of encess
<u> </u>	o Breach of the pervious layer of top aquifter Blockage/diversion of natural recharging o Change in Ground water recharging rate during summer	treated sewage  - Rain Water recharging  O If ground water level very high (i.e. available at surface) may lead to marshy
<u>†</u>	of water bodies during rainy scason. Reduction in recharging sees due to construction (some recharging by RWRS)	Conditions, enhanced salantly, efc.  O Loss of direct recharge area (during rainfall) (because of paving of active area & construction of tanks for storage of raw waterfreated water).
	Pollution/Dust generation during construction     Cransportation of construction material (vehicular emission)     Quarrying of stones/gravels/sand     Handling of material at site & construction activity     Loading/unloading of construction material	If improperly done it may contaminate ground water

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