

**DAMAGE ASSESSMENT REPORT, REMEDIATION
PLAN AND NATURAL & COMMUNITY
AUGMENTATION PLAN**

for

Commercial Project

at

Sector 6 & 11, Revenue State of Ratgal,

District Kurukshetra, Haryana

By

M/s Divine Infraestate Pvt. Ltd.

CHRONOLOGICAL HISTORY

1. Our project has a total sanction area of 24,513.97 m² out of which we have constructed 22,062.523 m² due to lack of awareness of the requirement to obtain Environment Clearance as per EIA Notification dated 6th September, 2006 and its amendments thereupon
2. We had stopped all construction activity at the construction site on 15th July, 2015 after becoming aware of the requirement to obtain Environment Clearance
3. We had submitted Environment Clearance application (Form I, Form IA & Conceptual Plan) in the prescribed format to MoEFCC on 31st July, 2015 since SEIAA, Haryana had not been reconstituted at that point of time
4. Upon reconstitution of SEIAA, Haryana we resubmitted our Environment Clearance application
5. We had submitted an affidavit and board resolution admitting our mistake and confirming stop of construction activity to SEIAA, Haryana dated 12th January, 2016
6. Our case was considered in the 128th SEAC, Haryana meeting held on 25th February, 2016 and it was appraised in light of MoEFCC, GoI OM dated 12th December, 2012 & 27th June, 2013 and was recommended to SEIAA, Haryana for further clarification
7. In the meantime the Hon'ble NGT had quashed the MoEFCC, GoI OM dated 12th December, 2012 & 27th June, 2013
8. Our case was considered by SEIAA, Haryana at its 89th meeting dated 28th March, 2016 and was kept on pending till clarification was received from MoEFCC on violation projects

MoEF & CC, GoI issued a recent Notification vide S.O. 804 (E), dated 14.03.2017, for one time opportunity for Violation matters. Therefore, we are hereby submitting our application for getting Environmental Clearance of the project as per EIA Notification dated 14.09.2006 as amended on 14.03.2017.

DAMAGE ASSESSMENT REPORT

The project activities have been confined within the project in the site only and the likely impacts on land-use, commercial facilities and open space is very meagre. The project does not have any adverse impact on the surrounding environment.

Project in this area will increase commercial facility in the area and will generate direct & indirect employment opportunities. There was no major disturbance to local ecology as no tree was cut for development, trees have been retained and will be a part of green area; the project has a proposal of green area development, which will increase the aesthetic value of the area. Total Green area development will be done on 2,887.93 sq. m. (30 % of plot area). The indigenous / local plants will be planted all around the periphery of the project area and along the roadside & lawn.

The project activities have not affected surroundings & any significant land disturbance resulting in soil erosion, subsidence and instability. The area is not susceptible to erosion. The excavated earth materials have been utilized at the site for levelling, backfilling and landscaping/green area development. This building construction Project is on a vacant land so no demolition work was carried out. Land/soil environment was temporarily affected due to activities like site preparation,

excavation, material handling & storage etc. during construction phase. Proper drainage systems have been provided to deal with the storm water in case of rain.

The project is not likely to alter or obstruct any natural drainage courses. There is no natural watercourse passing through the project site. Hence the project does not involve alteration of natural drainage systems. As a result of excavation of topsoil during construction phase, the impact on drainage pattern, and run off characteristics have been restricted to the small area. Proper rain water drainage facility has been provided and the run-off generated has been used for recharging the ground water level.

Excavation was carried out for foundation of building & construction of basement. The total soil generated was used at the site itself for the purpose of Site development, landscaping and Green area development. The waste generated during construction activities was limited to project site only and during construction phase only. These were reused for backfilling and road development after manual segregation. These wastes have been utilized for construction of roads. Conclusively, it can be stated that impacts may be confined to small area (mainly to project site) and for short duration. Mitigation plan suggests maximum re-use of construction waste on site, removal of non-reusable waste from the site and its proper disposal, which would reduce the impact significantly. The incremental pollution load from waste water generated from the project activity is negligible. We have adopted the measures like-STP for the treatment of waste water generated from the project & treated water will be used in the project premises.

There is a dual plumbing system for use of water with different water quality namely Municipal Supply Water/Ground water and Recycled Water which will result in optimal use of water for different applications thus saving on the high quality water. Installation of dual plumbing for using recycled water will save the potable water from municipal supply or ground water. Small quantity of fugitive emission is envisaged during transport and handling of construction material. Such emission will be temporary and controlled by providing water sprinkling and other viable technique. The machinery which was used for construction was of high standard and adhered to international standards. These standards themselves take care of noise pollution control / vibration control and air emission control. Hence insignificant impacts due to construction machinery are envisaged. Apart from this, the construction activities were being restricted to daytime only.

Thus, we can say that no major damage is envisaged by the development of this project.

REMEDIATION PLAN AND NATURAL & COMMUNITY AUGMENTATION PLAN

ENVIRONMENTAL MANAGEMENT PLAN DURING OPERATION PHASE:

AIR QUALITY MANAGEMENT:

- Total capacity of 1,625 kVA DG Sets will be provided for power backup in case of power failure. High sulphur HSD will be used as fuel
- The DG sets shall have appropriate stack height will be as per the guidelines of CPCB on the basis of their capacity.
- Proper ventilation system shall be provided to all part of the work areas of site.

- All operational vehicles will go through regular maintenance and pollution check up.
- All the private vehicle owners will be asked to have updated PUC (Pollution under Control) certificate.
- Large leaf plants will be use in tree plantation all around the project site and road side reduce the impact of the air pollution.

WATER RESOURCES MANAGEMENT:

- The total water requirement for the entire project will be 61 KLD.
- The fresh water required will be 33 KLD; the recycled water demand will be 28 KLD.
- The waste water generation from domestic use during the operation phase will be 45 KLD which will be treated in STP of capacity 55 KLD and whole of the treated water available (36 KLD) will be used for 9 KLD in horticulture development, 19 KLD for flushing purposes and 8 KLD to nearby construction sites on demand).
- Rain water harvesting system will be established within the premises to recharge ground water.

NOISE & VIBRATION MANAGEMENT:

- Proper road network has been designed as per the prevailing guidelines for smooth operation of traffic; impact in noise level due to the operational traffic will be negligible. ☐
- All the DG sets will be as per the E(P) Rule and noise level from the DG sets will be as per the prevailing standards. The sound control system designed to suppress the sound level to 75 db maximum at 1 meters distance in open free field environment as per ISO 8528 part 10.
- The DG will be built in Damper for anti-vibration ☐
- High class sheet metal (16 SWG-CRCA-Sheet) will be provided as an acoustic enclosure to reduce the noise level of DG set & also acts as weather proof housing. Genset will be an integral part of acoustic enclosure and whole construction will be on multi-fold sheet channels & ISMC sections. ☐
- Enclosure construction will be fully bolted keeping in view the major service requirements; all doors will be provided with specially designed hinges. ☐
- The D G sets will be used during event of power failure only. ☐
- The landscape design along the periphery of the plot has been developed to achieve attenuation factor conforming to noise standards. ☐
- The open spaces inside the plot is suitably landscaped and covered with vegetation to reduce the impact of noise. ☐
- Provision of silencer to modulate padding / noise isolators at equipment / machinery used for construction. ☐
- Provision of silencer to modulate the noise generated by machines. ☐
- Provision of protective device like ear muff/plugs to the workers. ☐
- Regular maintenance of vehicles & machinery would be taken up. ☐
- Construction activity limited up to Day time only. ☐
- D.G. sets will be kept in acoustic enclosures. ☐
- The technical specification of the Acoustic Enclosure are as follows:

- Silent DG set container shall be of modular construction with the provision to assemble and dismantle easily at site
- Enclosure is powder coated (inside as well outside) with a special pure polyester based powder. All Nuts and bolt/external hardware are made from stainless steel.
- The door handles are lockable type.
- Soundproofing of enclosure is done with high quality rock wool/mineral wool confirming to IS8183.
- The rock wool is further covered with fibre glass cloth and perforated powder coated ms sheet.
- Specially designed attenuators are provided to control sound at air entry to the container and exit from the container.
- Adequate ventilation is provided to meet air requirement for combustion and heat removal.
- Temperatures of enclosure does not exceed beyond 5-7°C of ambient temp.
- There is no provision for emergency shutdown from outside the enclosure.
- As per CPCB norms with acoustic enclosure the noise level shall be 75 dBA at one meter in absence of background noise.

SOLID WASTE MANAGEMENT

- Total Solid Waste generated from Project (Residential & visiting population) will be 313.34 kg/day (0.5 kg/day from Fixed & 0.25 kg/day from Floating). ☐
- Biodegradable & Non-Biodegradable waste will be segregated at source in accordance with MSW (M&H) Rules, 2016. ☐
- There will be site specifically earmarked within the site for solid waste management. ☐
- The type of solid waste generated from the project activity will be only the domestic. ☐
- The solid waste generation will be in the form of sewage sludge generated from the STP. ☐
- The sewage sludge from sewage treatment plant will be converted into an odourless soil conditioner and used as manure for gardening purposes. ☐
- Waste storage bins will be provided for wet and dry garbage.
- The same shall be segregated and stored in bins. ☐
- The biodegradable waste shall be composted to form manure and inorganic waste shall be sold to authorized vendor for recycling. ☐
- Recyclable inorganic wastes will be sold. ☐
- The collection, transportation, treatment and disposal of MSW will be serviced by the Authorized Agency/ Contractor.

GREEN AREA & DEVELOPMENT MANAGEMENT

- Green area will be developed in an area of 2,887.93 sq. m. (30 % of plot area) of the total plot area.
- It has been to plant large leaf trees for roadside plantation and area is for lawns & other green areas.
- Plantations would be of large leaf trees that provide adequate shade and are semi evergreen to evergreen.

FIRE & SAFETY MANAGEMENT

- Fire Fighting Designed: As per National Building Code (NBC) 2005. ☐
- As per the NBC / Local norms the present risk is falling under “LIGHT HAZARD”. ☐
- Fire System shall cover the following:
 - Wet Riser System
 - Portable Fire extinguisher
 - Yard Hydrant (External Hydrant System)
- Fire Tender route have been given with access to each Tower (as evident from the site plan)
- Provision of fire escape staircase. ☐
- External yard hydrants in galvanized steel fire hose cabinet (weather proof). ☐
- Fire escape staircases as per NBC requirements. ☐
- Fire Sprinklers & Fire Alarm system. ☐
- Fire fighting equipments will be divided into water & Foam based fire fighting depending upon the nature of fire Sand buckets will be placed on each floor of the project.

DETAILS OF ENERGY CONSERVATION MEASURES

- The design of the building is such that maximum use of natural lighting can be achieved. The walls, roofs and opening will be designed that influx of heat is minimum. The design also incorporates the optimal and judicious use of natural lighting.

BUDGET ALLOCATION FOR ENVIRONMENT MANAGEMENT PLAN (EMP)

S.No	Particulars	Capital Cost (INR in Lacs)	Recurring Cost (INR in Lacs)
1.	Sewage Treatment Plant	25.0	6.0
2.	Rainwater Harvesting System	6.0	2.0
3.	Solid Waste Management	4.0	2.0
4.	Environmental Monitoring	9.0	9.0
5.	Green Area Development	15.0	5.0
6.	Others	3.0	3.0
	Total	62.0	27.0