

Kohinoor Paper & Newsprint Pvt. Ltd.	Environmental Impact Assessment for Proposed Expansion of Paper Plant capacity from 140 TPD to 200 TPD and installation of 200 TPD Duplex Board Plant along with 8 MW Captive Co-generation Power Plant at Falta, District South 24 Parganas, West Bengal	ES - 1
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EXECUTIVE SUMMARY

1.0 INTRODUCTION

Kohinoor Paper & Newsprint Pvt. Ltd. (KPNL) incorporated on 26th December 2006. KPNL has a 140 TPD Paper Plant for manufacture of both Writing & Printing and Newsprint paper along with a 6 MW Co-generation Power Plant at West Bengal Industrial Infrastructure Development Corporation's Falta Industrial Growth Centre, Phase-II at Falta in South 24 Parganas District of West Bengal. To meet up with the expected rising demand in the paper products, the project proponent is planning to increase its existing paper plant capacity from 140 TPD to 200 TPD along with Duplex Board unit and Captive Co-generation power plant.

M/s Envirotech East Pvt. Ltd. have conducted Environmental Impact Assessment (EIA) for the proposed expansion project and formulated an Environmental Management Plan (EMP).

2.0 SITE LOCATION

The project site of KPNL is situated at WBIIDC's Falta Industrial Growth Centre, Phase-II, Sector-V, P.S. Ramnagar, District South 24 Parganas of West Bengal. The project site is located between latitude 22°14'24.27"N and longitudes 88°05'43.96"E. The plant is situated near NH-117 at a distance of 41 kms from Kolkata.

The nearest developed town Diamond Harbour is situated around 13.5 kms in south-east direction from the project site. Industrially developed town Haldia is situated around 25 kms in south direction w.r.t. the project site.

Distance from Howrah Railway station to the project site is about 42 kms. The nearest airport is Kolkata which is about 54 kms from the project site in North-East direction. The project site has good connectivity with sea port of Haldia and Kolkata.

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3.0 PROJECT HIGHLIGHTS

The principal features or highlights of the proposed expansion project of KPNL under study are as follows,

Location	West Bengal Industrial Infrastructure Development Corporation's (WBIIDC) Falta Industrial Growth Centre, Phase-II, Sector-V, P.S. Ramnagar, District South 24 Parganas, West Bengal.
Land requirement	The proposed project will be installed on the total project area of 30.36 Acres, which is already acquired. The land is leased with WBIIDC.
Raw water requirement & source	Make up water requirement for the expansion project is around 300 cum/hr (69.23 cum/hr for Paper Plant & 230.77 cum/hr for the Duplex Board Plant including Power Plant). Water will be sourced from River Hoogly.
Power requirement	Requirement of power for the proposed project is around 10 MW, which will be sourced mostly from the proposed 8 MW Captive Co-generation Power Plant and the balance from West Bengal State Electricity Distribution Company Limited (WBSEDCL).
Effluent generation, treatment & disposal	Around 230.5 m ³ /hr. effluent will be generated, which shall be properly treated in the existing Effluent Treatment Plant, the capacity of which shall be increased to meet the additional requirement. Treated effluent (from the ETP) meeting relevant effluent discharge standards will be let out into river Hooghly.
Air pollution control	Adequate control measures like installation of bag filters, electrostatic precipitators, dust suppression system and stacks of adequate height at relevant points.
Manpower	154 persons
Project cost	Rs. 211.19 Crores

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The existing and proposed units and its capacity are presented below:

EXISTING UNITS

Sl. No.	unit	Existing Capacity
1.	Writing, Printing and News Print Paper unit	140 TPD
2.	Captive Power Plant	6 MW

PROPOSED UNITS

Sl. No.	unit	Proposed Capacity
1.	Writing, Printing and News Print Paper unit	60 TPD
2.	Duplex Board unit	200 TPD
3.	Captive Co-generation Power Plant	8 MW

4.0 BASELINE ENVIRONMENTAL SCENARIO

The area falling within the radius of 10 km around the proposed expansion project at WBIIDC's Falta Industrial Growth Centre, Phase - II, Sector - V, P.S. Ramnagar, District South 24 Parganas in West Bengal has been considered as study area. On-site environmental quality monitoring was carried out from 1st October, 2010 - 31st December, 2010.

4.1 Meteorology

The monthly maximum and minimum temperatures recorded on-site during the aforesaid monitoring period (1st October, 2010 - 31st December, 2010) varied between (30.5 - 33.5)°C and (10.5 -18.5)°C respectively with overall maximum and minimum temperatures being 33.5°C and 10.5°C respectively.

The monthly minimum and maximum relative humidity recorded on-site during the said monitoring period varied between (50 - 59)% and (73 - 75)% respectively, the overall minimum and maximum being 50 % & 75 % respectively.

During the said monitoring period, the monthly mean wind speed measured on-site varied between 3.1 Km/hr to 4.2 Km/hr. The

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overall mean wind speed during the period was 3.7 km/hr. The most predominant wind direction was NE, NW.

4.2 Ambient Air Quality

Ambient air quality was monitored at eight (8) locations in and around the project site.

The overall mean of 24-hourly average values of PM₁₀, PM_{2.5}, SO₂ and NO_x in the area (mean of all the 8 locations) were 60.71 µg/m³, 28.17 µg/m³, 8.40 µg/m³ and 27.37 µg/m³ respectively.

4.3 Water Quality

Water samples were collected and analyzed at eight (8) locations to assess the surface water quality in the study area. Water samples were collected from eight (8) locations to assess the baseline status of the ground water quality of the study area.

The pH values of the collected river water samples were found in the range of (6.92 - 7.17). Dissolved Oxygen was observed in the range of (6.1 - 6.7 mg/l). The Total Dissolved Solids were found in the range of (314-637) mg/l while Total Hardness of the collected sample was found in the range of (196 - 314) mg/l. Calcium was found 41-55 mg/l. Oil and grease was below detected limit (<1.4 mg/l). The Sulphate, Nitrate and Chloride in the collected sample were observed in the range between 24 - 56 mg/l, 4.2 - 6.5 mg/l and 110 - 254 mg/l respectively. The Iron & Zinc contents were found in the range of 0.18 - 0.34 mg/l & 0.08 - 0.14 mg/l respectively.

The pH value of the collected pond water samples was found in the range of (6.89 - 7.34). Dissolved Oxygen was observed in the range of (5.6- 6.1) mg/l. The Total Dissolved Solids were found in the range of 229 - 450 mg/l while Total Hardness of the collected sample was found in the range of 134 - 240 mg/l. Calcium was found 36 - 57 mg/l. Oil and grease was well within the detected limit. The Sulphate, Nitrate and Chloride in the collected sample were observed in the range between 6-11 mg/l, 2.8-5.1 mg/l and 55-94 mg/l respectively. The Iron & Zinc contents were found in the range of 0.14 - 0.4 mg/l & 0.08 - 0.12 mg/l respectively.

Conclusion can be drawn in the light of the overall analysis made so far that the surface water in the study area is free of any kind of

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industrial and urban pollution and has been found to be generally fit for human consumption.

4.4 Noise

A total of 10 locations around the proposed project were selected for the measurement of ambient noise levels.

During the day time, the equivalent noise levels were found to vary in the range of (52.8-63.2) dB (A) while in the night time, the equivalent noise levels were observed to be varying in the ranges of (43.2 - 56.2) dB (A).

4.5 Ecology

The study area is found to have a good vegetation cover due to helpful climatic conditions and good soil quality in the area.

There is no national park, reserved forest, wildlife sanctuary existing within 10 km radius of the project site. There are naturally growing plants, vegetation and grasses. The overall floral composition in the whole study area is quite rich.

4.6 Demography and Socio-economy

The 10 km radius study area around the proposed project comprises of seven CD Block under districts South district 24 Parganas, Howrah & East Midnapur in West Bengal. A total of 219 villages fall under the study area.

Majority of the study area is Rural and semi-urban in nature and moderately populated with the total population of 4,44,578 (as per 2001 Census). The sex ratio is about 955 females per 1000 males. The overall literacy rate is about 62.25%. The male literacy rate was 69.81% (of total male population), whereas corresponding figures for the female literacy rate was 54.33% (of total female population). The principal language is Bengali. The principal staple food is rice.

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5.0 ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

5.1 Impacts on Air Quality

Stack emissions would be constituted of mainly Particulate matters, SO₂ & NO_x. There will be one stack, attached to the boiler of 8 MW Captive co-generation Power Plant.

As recommended by CPCB, GLCs at various receptor locations within 10 km radius have been computed for the three months' period (1st October, 2010 – 31st December, 2010), based on the hourly meteorological data of this period. The computation has been made applying Industrial Source Complex (ISC3) model, developed by United States Environmental Protection Agency (USEPA), which is most widely used and also recommended by CPCB (PROBES/70/1997-98).

The maximum incremental values of SO₂, NO_x & PM are about 7.76, 2.97 & 0.43 µg/m³ respectively, which will occur at a distance of about 0.8 km. in 'SW' direction respectively w.r.t. the ARP.

The predicted maximum GLCs of PM, SO₂ & NO_x due to the operation of the proposed project is well within the prescribed limits. Therefore, there will be insignificant impact on the Air Quality of the area due to the operation of the project.

5.2 Impacts on Water Quality

Effluent from the process will be properly treated in the existing Effluent Treatment Plant, the capacity of which shall be increased to meet the additional requirement. Treated effluent (from the ETP) will be let out into river Hooghly. As the quality of the waste water, to be discharged into Hoogly River shall be within relevant effluent discharge standards, no impact on the water quality of the receiving water body is envisaged.

5.3 Impacts on Soil

There will be solid waste generation, but will be managed in the proper manner. This will ensure that there will not be any impact on soil quality due to the disposal or deposition of solid waste.

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5.4 Impacts on Land Use

The proposed development will take place inside the already acquired land area within the existing Steel Plant, so there will not be any impact on the land use pattern of the area.

5.5 Impacts on Biological Environment

The surrounding area has substantial vegetation in the form of village orchards, roadside trees and agriculture. If the gaseous emission is controlled properly, there will not be significant impact. There will be sufficient plantation of trees at the plant site. All these measures, if implemented properly will ensure insignificant impact on the local vegetation from the proposed project and may improve the vegetation scenario of the area.

5.6 Impacts on Socio-Economic Environment

The project will offer substantial employment potential during construction phase and operation phase, which will have beneficial impact.

6.0 ENVIRONMENTAL MANAGEMENT PLAN

M/s Kohinoor Paper & Newsprint Pvt. Ltd. (KPNL) will develop various management activities for the Environmental Management Programme which will meet all statutory requirements and help to improve environmental quality.

In order to improve the aesthetic look of the area and enhance the land use as well as to compensate for any loss in ecology during construction, adequate plantation programmes around the project site have been planned and will be adopted. Development of green belt will include plantation of trees along boundary of the factory, roads, raw material yard and other available spaces. Over 33% of total area of factory will be covered under green cover.

A detailed monitoring for different environmental parameters will be carried out as per direction of State Pollution Control Board. An environmental management group will be established to implement the management plan.