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**STATE LEVEL EXPERT APPRAISAL COMMITTEE – DELHI
OFFICE OF DELHI POLLUTION CONTROL COMMITTEE
4th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-6
VISIT US AT : <http://dpcc.delhigovt.nic.in>**

F.No. DPCC/MS/SEAC/10/1103

Dated: 11/5/10

Please find enclosed herewith the minutes of the 18th meeting of the **State Level Expert Appraisal Committee (SEAC)** held on **21-04-2010 at 10:00 A.M. in the Conference Room of DPCC, at 4th Floor, ISBT Building, Kashmere Gate, Delhi-06** for information and necessary action if any.

**Dr. A.K. Ambasht
Secretary (SEAC)**

To:-

1. **Prof. C.R. Babu, (Chairman, SEAC)**, Centre for Environmental Management of Degraded Ecosystems, School of Environment Studies, University of Delhi-110007.
2. **Dr. R.K. Khandal, (Member, SEAC)**, Director, Shriram Institute of Industrial Research, 19, University Road, Delhi-110007.
3. **Prof. Subir Kumar Saha, (Member, SEAC)**, Director (Vice-Chancellor) School of Planning and Architecture, 21, SPA Complex, New Friends Colony, New Delhi-110065.
4. **Dr. (Mrs.) P. Malarvizhi, (Member, SEAC)**, Associate Professor, Institute for integrated Learning in Management, No.2, Lodhi Institutional Area, Lodhi Road, New Delhi-110003.
5. **Prof. Mihir Deb, (Member, SEAC)**, Professor, Department of Geology, University of Delhi, Delhi-110007.
6. **Sh. Amarjeet Singh, (Member, SEAC)**, Chief Engineer (C&E Division), Central Electricity Authority, 2nd Floor, N-Wing, Sewa Bhawan, R.K. Puram, New Delhi-110006.

Copy To:

1. **Sh. Jagdish Sagar, IAS (Retd.), Chairman, SEIAA**, B-401, SPS Residency, Vaibhav Khand, Indira Puram, Ghaziabad, UP.
2. **PS to Chairman (DPCC) cum Secretary (Environment)**, for kind information.
3. **Sr. Scientist (IT) - (DPCC)** for necessary action regarding uploading the minutes on the website.

**Dr. A.K. Ambasht
Secretary (SEAC)**

Minutes of the 18th meeting of State Level Expert Appraisal Committee (SEAC) held on 21.04.10 from 10:00 am to 6:00 pm in the Conference Room of DPCC

The 18th meeting of State Level Expert Appraisal Committee (SEAC) was held on 21-04-10 in the conference room of DPCC under the Chairmanship of Professor C.R. Babu. The following members of SEAC were present in the meeting:

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|-----------------------------|-------------|
| 1. Dr. A.K. Ambasht | - Secretary |
| 2. Professor Subir Kr. Saha | - Member |
| 3. Dr. (Mrs.) P. Malarvizhi | - Member |
| 4. Sh. Amarjeet Singh | - Member |
| 5. Dr. R.K.Khandal | - Member |

Dr. M. P. George (Sr. Scientist, DPCC) and Dr. Chetna (Scientist, Environment) assisted the Committee. Dr Anil Kumar (Director, Environment) also participated in the meeting.

The Chairman welcomed all the members of the Committee. The minutes of the 17th meeting of the SEAC was confirmed by the members.

With due permission from the Chairman, cases were considered as per the placed agenda.

Case No. 46

Project Name : Fully Automated Multilevel Underground Parking at Delhi High Court parking premises
Project Proponent : Registrar, Delhi High Court
Project Consultant: Nil

The project was earlier considered by the SEAC in its meetings held on 07-08-2009, 09-10-2009 and 07-12-2009. The proposal is for the grant of Environmental Clearance for Fully Automated Multilevel Underground Parking at Delhi High Court parking premises. The total plot area is 9670 m². The total built-up area is 41237.52 m². Height of the building (amenities and service block) is 5.5 m above G.L. Depth of Parking Complex is 18 m with 06 underground floors. Total No. of cars proposed for parking is 1475 (approx.). Water will be arranged from bore wells during construction phase. During operation phase, the water requirement will be around 30 KLD and it will be met through supply by NDMC. The sewage generation during operation phase will be around 3 to 4 KLD and will be discharged in the existing municipal sewer. The municipal waste generation will be approx. 1 MT/month. Power requirement of 1600 KVA will be supplied by local body. Power back up is being provided through 2 D.G. sets of 750 KVA each. Fuel tanks (2 Nos.) of 990 litres capacity is also proposed to be located at the site. The estimated cost of the project is Rs. 125 crores.

Since the project proponent did not have the **requisite** information, i.e the status of the monument located inside the project site, the Committee decided to defer the project. The

Committee also requested the Member Secretary to write once upon to **Archaeological Survey of India (ASI), State ASI, Heritage Conservation Committee and NDMC** on the status of the monument in the project site.

Case No. 59

Project Name : Environment Clearance for Redevelopment of ISBT at Sarai Kale Khan, New Delhi.
Project Proponent : M/s Transport Department (Govt. of NCT of Delhi)
Project Consultant: M/s Kadam Environmental Consultants

The proposal was considered by the Committee and the proponent made a presentation on the proposal. The proposal is for the grant of Environment Clearance for Redevelopment of ISBT at Sarai Kale Khan, New Delhi. Total Plot Area estimation is 70,000 m². Total Built-up area is 93,821.31 m². The total proposed ground coverage is 16,181.40 m². The Floor Area is 61,985.31 m². Total green area will be 25,033.36 m² (i.e. 25.4% of the total plot area). The redevelopment project includes two blocks: Block A (G+1) of 14.09 m height and Block B (G+12) of 55.15 m height. There is only single basement provided having an area of 30,917 m². It is proposed to provide parking of 232 ECS on surface and 1265 ECS in basement. The estimated population is 10,000 (floating & fixed staff) and 44800 bus passengers. Total water demand for the project will be 1424.42 KLD including fresh water requirement of 623 KLD. The source of fresh water will be Delhi Jal Board and existing borewells at site. The quantity of wastewater generated is approx. 843.59 KLD. This wastewater will be treated with the STP of 850 KLD capacity provided within the site. The quantity of treated wastewater generated is approx. 801.42 KLD which will be used for HVAC cooling, flushing, bus washing and horticulture. Approx. 5 to 6 Ton/day solid waste will be generated from proposed project. The power requirement for the project is estimated as 4788 KW and will be supplied by NDPL. 4 D.G. sets of 1500 KVA capacity each will be installed as back up during power failure. The estimated cost of the project is Rs. 150 crores.

Based on the information furnished, presentation made and discussions held, the Committee suggested to the project proponent that the information submitted does not meet the requirement for Environmental Clearance. The Committee sought the following information from the project proponent for its further consideration:

- (i) Revised Form 1 as per EIA notification, 2009.
- (ii) Conceptual Plan.
- (iii) Detailed area statement (total and individually for both A and B Blocks/Terminals) including plot area and floor-wise built-up area and FAR.
- (iv) Existing Water and Power demand.
- (v) Re-examination of the Air & Water quality data and Noise levels.
- (vi) Landscape Plan.
- (vii) Disaster Management Plan.
- (viii) Total parking provision details.

- (ix) Evacuation plan.
- (x) Details of incremental pollution load by the vehicular movement.
- (xi) Examine the feasibility of using LED lamps in street lighting.
- (xii) Identify a location for Ambient Air Monitoring Station for DPCC and submit details.
- (xiii) Clearance from Chief Fire Officer.

The Committee also decided that the following conditions should be laid down at the time of issuing EC:

- (i) Zero Discharge of the waste water.
- (ii) All the surface run-off and roof top run-off should be channelized and discharged into surface ponds to be located within the project site.
- (iii) Ground water withdrawal subject to permission from DJB.
- (iv) Adoption of Energy Conservation Building Code.
- (v) Biodegradable waste to be disposed through in-vessel composting/ Pyrolysis/biogas generation.
- (vi) CPWD safety norms should be followed during construction.
- (vii) Ambient Air, water and noise levels should be monitored on quarterly basis.
- (viii) In house Environment Monitoring unit/cell should be set up.

Case No. 73

Project Name : Proposed Expansion of ESIC Hospital at Sree Maa Anandmayee Marg, Okhla, Ph-I, New Delhi

Project Proponent : M/s Employees State Insurance Corporation

Project Consultant : M/s Grass Roots Reaserch & Creation Pvt Ltd.

The proposal was considered by the Committee and the proponent made a presentation on the proposal. The proposal is for grant of Environmental Clearance for Proposed Expansion of ESIC Hospital at Sree Maa Anandmayee Marg, Okhla, Ph-I, New Delhi. The existing number of beds is 216 and proposed expansion will have 284 beds. The project is to be developed on a total plot area of 27,801.67 m². There is an existing building or structures at the proposed site which will be expanded on a plot area of 3844 m². The detailed area statement of the proposed project is as under:

S. No.	Particulars	Existing Building (Old) in Sqm.	Proposed Expansion (New) in Sqm.	Total in Sqm.
1	Plot Area	23,957	3,844	27,801
2	Built-up Area	22,836	41,028	63,864
3	FAR Permissible	47,914	7,688	55,602
4	FAR Proposed	20,981	22,121	43,102
5	Permissible Ground Coverage			8,341
6	Proposed Ground Coverage			7,630
7	Green/Landscape Area			9,985

The total projected population of the proposed expansion project is approx. 3,759 persons in addition to the existing population of 3141 persons including beds, staff, OPD and visitors. The total parking provided is 823 ECS. Total water requirement for the proposed project has been calculated around 272 KLD, out of which 191 KLD will be total domestic water demand. The source of water will be DJB which will be augmented by borewells. It is expected that the proposed project would generate approx. 164 KLD of waste water. The total waste water generation of the project will be treated in 200 KLD capacity STP with MBR technology. The treated waste water of 148 KLD will be used for Horticulture, Flushing, DG/ HVAC Cooling and Recreational purposes etc. within the project premises. The total power demand for the proposed project is 18000 KW which will be provided by NDPL. To cater electricity supply during power failure, 1 D.G Set of 925 KW capacity has been proposed for the proposed buildings and 1 D.G Set of 1075 KW capacity is used for the existing buildings. Total Estimated Solid Waste and Bio-medical Waste generation will be 985 Kg/day and 247 Kg/day, respectively. 15 Rain Water Harvesting pits will be provided at the site. The total cost of the proposed project is Rs. 162.5 Crores.

Based on the information furnished, presentation made and discussions held, the Committee suggested to the project proponent that the information submitted does not meet the requirement for Environmental Clearance. The Committee sought the following information from the project proponent for its further consideration:

- (i) Revised Form 1 and 1A after incorporation of both existing as well as proposed details of the project.
- (ii) Revised water balance chart for existing building as well as proposed expansion.
- (iii) Details of ETP to be proposed.
- (iv) Existing and proposed power demand.
- (v) Layout Plan.
- (vi) Floor wise built-up area details with plans.
- (vii) Landscape plan.
- (viii) Revised Solid waste generation details.
- (ix) Revised Rain Water Harvesting details.
- (x) Re-submit Ambient air quality data monitored by NABL accredited Laboratory.
- (xi) Submit baseline data for water quality and noise levels.
- (xii) Examine the feasibility of using LED lights in common areas.
- (xiii) Disaster management plan/Emergency plans.
- (xiv) Traffic management plan.
- (xv) Clearance from Chief Fire Officer.

The Committee also decided that the following conditions should be laid down at the time of issuing EC:

- (i) Ground water withdrawal subject to permission from DJB.
- (ii) E-waste should be managed as per the guidelines from Central Pollution Control Board.

- (iii) Six monthly Ambient Air Quality Monitoring and the data have to be submitted to DPCC.
- (iv) Daily monitoring of treated effluent from ETP till its stabilization.
- (v) Adoption of Energy Conservation Building Code.

Case No. 74

Project Name : Environment Clearance of the Group Housing "Ahinsa Vatika" at Shahdara, Delhi

Project Proponent : M/s Ahinsa Builders Pvt. Ltd.

Project Consultant: M/s Perfect Solutions Pvt. Ltd.

The proposal was considered by the Committee and the proponent made a presentation on the proposal. The proposal is for grant of Environment Clearance of the Group Housing "Ahinsa Vatika" at Shahdara, Delhi. The proponent has planned to construct a Plotted Colony with provision for community hall. An area of 4498.766 sq mt. was procured for the project purpose, out of which 1499.44 sq mt. will be utilized for ground coverage. The details of the proposed project are as under:

S. No.	Particulars	Total
1	Total Plot Area	4,599 sq mt.
2	Ground Coverage	1,181.594 sq mt.
3	FAR	15,485.996 sq mt.
4	No. of Basement	3
5	Total Basement Area	7,842 sq mt.
6	Stilt Area	1,181.594 sq mt.
7	Built-up Area	24,509.623 sq mt.
8	Green Area	1997.93 sq mt.
9	Maximum No. of Floors	S+14
10	No. of Blocks	1 Block
11	No. of Dwelling Units	158
12	No. of EWS	56
13	Total Population	1072
14	Max. Height of Building	45 m
15	Parking	357 ECS

Total water requirement has been estimated as 131 KLD, out of which 85 KLD will be fresh water demand which will be met by Municipal Supply. Total quantity of wastewater generation in the project is 105 KLD. The generated sewage will be collected and treated in an in-house Sewage Treatment Plant of 150 KLD. The quantity of treated wastewater from the STP is 92 KLD, out of which 46 KLD will be used for Flushing, Gardening, Process & Wash and for other miscellaneous purposes. Rest of the 46 KLD will be discharged to the public sewer. The total power demand for the proposed project is 1368 KVA which will be provided by BSES. To cater electricity supply during power failure, 2 D.G Sets of 200 KVA capacity each has been proposed. Total Estimated Solid Waste generation will be 431 Kg/day. 1 Rain Water Harvesting pit will be provided at the site. The total cost of the proposed project is Rs. 25 Crores.

Based on the information furnished, presentation made and discussions held, the Committee suggested to the project proponent that the information submitted does not meet the requirement for Environmental Clearance. The Committee sought the following information from the project proponent for its further consideration:

- (i) Hon'ble Supreme Court's order with respect to land ownership with reference to 'H' Category industries.
- (ii) Details of land transfer deeds.
- (iii) Revise Form 1 and 1A with respect to change in location of the project and after the correction of discrepancies in the forms.
- (iv) Conceptual Plan.
- (v) Baseline data for Air & Water quality and Noise levels.
- (vi) Action plan for Corporate Social Responsibility.
- (vii) Clearance from Chief Fire Officer.

The Committee also decided that the following condition should be laid down at the time of issuing EC:

- (i) Zero discharge of the waste water.
- (ii) Adoption of Energy Conservation Building Code.

Case No. 75

Project Name : Environment Clearance of Expansion of the Group Housing "Metro Park" at Dwarka Morh, Delhi

Project Proponent : M/s Uppal Housing Pvt. Ltd.

Project Consultant: M/s Perfact Solutions Pvt. Ltd.

The proposal was considered by the Committee and the proponent made a presentation on the proposal. The proposal is for grant of Environment Clearance of Expansion of the Group Housing "Metro Park" at Dwarka Morh, Delhi. The project had been accorded EC vide letter no. 21-610/2007-IA.III dated 17-05-2007 from Ministry of Environment & Forests, Govt. of India, New Delhi for FAR of 1.67 (i.e. 36,634.47 sq mt). Now due to enhancement of FAR to 1.96 (i.e. 43,130.52 sq mt), the built-up area has been revised to 70,659.75 sq mt. Therefore, a fresh application has been made to SEAC-Delhi. However, before the start of presentation the Committee clarified that it is a fresh project and not an expansion as mention in the application by project proponent.

The proposed project is for construction of Residential Complex with provision for Community Hall and Senior Citizen Hall. An area of 21,936.814 sq mt. was procured for the project purpose, out of which 4869.97 sq mt. will be utilized for ground coverage. The details of the proposed project are as under:

S. No.	Particulars	Total
1	Total Plot Area	21,936.814 sq mt.
2	Ground Coverage	4869.97 sq mt.

3	FAR	43,130.52 sq mt.
4	No. of Basement	2
5	Total Basement Area	23,595 sq mt.
6	Stilt Area	3,934.23 sq mt.
7	Built-up Area	70,659.75 sq mt.
8	Green Area	8,500 sq mt.
9	Maximum No. of Floors	B+S+12
10	No. of Towers	5 Nos.
11	No. of Dwelling Units	372
12	No. of EWS	164
13	Total Population	2452
14	Max. Height of Building	40.2 m
15	Parking	1005 ECS

Total water requirement has been estimated as 407 KLD, out of which 229 KLD will be fresh water demand which will be met by Municipal Supply. Total quantity of wastewater generation in the project is 302 KLD. The generated sewage will be collected and treated in an in-house Sewage Treatment Plant of 400 KLD. 178 KLD from the treated wastewater from the STP will be used for Flushing, Gardening, D.G Cooling and for other miscellaneous purposes. Rest will be discharged to the public sewer. The total power demand for the proposed project is 2900 KW which will be provided by BSES. To cater electricity supply during power failure, 4 D.G Sets of 625 KVA capacity each has been proposed. Total Estimated Solid Waste generation will be 1157 Kg/day. 8 Rain Water Harvesting pits will be provided at the site. The total cost of the proposed project is Rs. 210 Crores.

Based on the information furnished, presentation made and discussions held, the Committee suggested to the project proponent that the information submitted does not meet the requirement for Environmental Clearance. The Committee sought the following information from the project proponent for its further consideration:

- (i) Authorization Letter from project proponent to present the case before the Committee.
- (ii) Revised Form 1 & 1A w.r.t change in the title of the project and correction of discrepancies in data.
- (iii) AAI approval.
- (iv) Conceptual Plan.
- (v) Layout plan.
- (vi) Landscape Plan.
- (vii) DUAC approved building plans.
- (viii) Baseline data for Air & Water quality and Noise levels.
- (ix) Details with respect to width of the peripheral green belt.
- (x) Details of Rain Water Harvesting pits and details of depth of aquifer.
- (xi) Location of D.G Set and STP on a layout map.
- (xii) Evacuation Plan/ Fire fighting plan.
- (xiii) Design criteria adopted for Fire fighting system.
- (xiv) Design details for Pyrolysis plant to be adopted for solid waste treatment.
- (xv) Plan for Sludge disposal from STP.

- (xvi) Action plan with budget for Corporate Social Responsibility.
- (xvii) Details of budget allocation for EMP for construction as well as operation phase.

The Committee also decided that the following conditions should be laid down at the time of issuing EC:

- (i) Zero discharge of the waste water.
- (ii) No solid waste or sludge should be disposed to the landfill site.
- (iii) Clearance from Chief Fire Officer should be obtained for new building plans.
- (iv) Wood lots should be developed and the green belt having at least two rows of trees should be developed.
- (v) Area above basement should be made green.
- (vi) Adoption of Energy Conservation Building Code.
- (vii) Plantation should be started before coming monsoon.

The project proponent should attend the meeting during re-consideration of the project.

Case No. 76

Project Name : Environment Clearance of the Commercial Complex at Asset No.-11, Hospitality District, DIAL, IGI Airport, Delhi

Project Proponent : M/s Aspen Buildtech Limited

Project Consultant: M/s Perfect Solutions Pvt. Ltd.

The proponent requested the Committee to defer the case because of his inability to attend the meeting. As per the request of the proponent, the Committee decided to consider this project in the next meeting.

Case No. 77

Project Name : Environment Clearance of the Commercial Complex at Asset No.-08, Hospitality District, DIAL, IGI Airport, Delhi.

Project Proponent : M/s Oak Infrastructure Developer Limited

Project Consultant: M/s Perfect Solutions Pvt. Ltd.

The proponent requested the Committee to defer the case because of his inability to attend the meeting. As per the request of the proponent, the Committee decided to consider this project in the next meeting.

Case No. 78

Project Name : Environment Clearance of the Commercial Complex at Asset No.-07, Hospitality District, DIAL, IGI Airport, Delhi.

Project Proponent : M/s Oak Infrastructure Developer Limited

Project Consultant: M/s Perfect Solutions Pvt. Ltd.

The proponent requested the Committee to defer the case because of his inability to attend the meeting. As per the request of the proponent, the Committee decided to consider this project in the next meeting.

Under any other item for consideration, the Chairman brought to the notice of the members about the status of **Environmental Clearance for Residential Complexes, Phase-I, Dheerpur, Delhi proposed by the M/s Delhi Development Authority** (Dheerpur project area, DDA). He brought the following points to the notice of the members.

A subgroup of SEAC (Professor C.R. Babu, Professor Subir Kumar Saha, Dr. A.K. Ambasht and Dr. Anil Kumar) visited the project area and suggested that the project proponent submit a detailed map showing important landscape features including wetlands and redesigns the entire layout of the Project area keeping in view the specific location of wetlands. In the meeting of SEAC held on 29th March 2010, it was decided to defer the decision on the project as the Vice Chairman, DDA had fixed a meeting relating to the land-use of the Dheerpur project area. Further, the project proponent did not have the map showing wetlands. The Chairman, SEAC appraised the members of the discussion that took place in the meeting held with the Vice Chairman, DDA.

A brief note on justification for change in land use of Dheerpur Project area along with the layout map of the area with suggested land use was emailed to the members of SEAC for their observations by the Chairman of SEAC. The suggestions made by the members were incorporated in the note (Annexure I). The SEAC accepted the proposed change in land use of the Dheerpur project area as suggested in the note and indicated in the map. The SEAC also decided that the minutes of the meeting along with a copy of the Annexure I be sent to Vice Chairman, DDA for his information and necessary action.

The Secretary appraised the Committee members about re-examination of the built-up area of the two projects namely **(a) Construction of North Gate Orbit Plaza at Gujrawala Town, Azadpur, New Delhi by M/S Today Homes and Infrastructure Pvt. Ltd., and (b) Construction of Integrated Station Building and Commercial development at Games Village, Near Akshardham, New Delhi by M/S Parsvnath Developer**, as per the decision of SEAC taken during its meeting held on 20.02.2009 and 30.01.2009, respectively. As per the SEAC decision, work of built-up area examination was accorded to School of Planning and Architecture but due to last minute change of plan by SPA officials, representatives of Civil Engineering Department of IIT, Delhi were requested to perform the already fixed on-site inspection at project sites. The inspections were carried out on 05.04.2010 and 06.04.2010 respectively. The Committee reviewed the inspection report submitted by IIT and found that the built-up area is less than 20,000 sq mt in both cases and hence both the projects are exempted from Environment Clearance as per EIA notification 2006.

The Secretary also appraised the Committee about a request letter from SEIAA, Haryana seeking no objection or concurrence for appraisal of **Environmental Clearance application for setting up a leather dyeing unit at plot no. 9 MIE, Bahadurgarh, Haryana by M/s Alsa Industries Limited** as the project is located within 10 kms of the inter-state boundary between Haryana and Delhi. Considering the polluting activity of the project, Committee decided that the project be referred to Ministry of Environment & Forests, GOI and the same may be communicated to the Chairman, SEIAA of Haryana.

It was decided by the Committee that the next meeting of SEAC will be held on 14th May, 2010.

The meeting ended with vote of thanks to the Chair.

Justification for change in land use in Dheerpur Project Area for the conservation of wetlands and ecological sustainability and suggested land use pattern

1. The areas surrounding the Dheerpur Project (Mukherjee Nagar, Model Town, Azadpur, Adarsh Nagar and Jhangirpuri) are thickly populated with extremely high human population density. Construction of additional hundreds of residential flats in the area will make the density of human population so high that it may pose a public health hazards leading to outbreaks and spread of waterborne, air-borne and vector borne diseases and consequent epidemics of infectious and communicable diseases, besides reduction in the quality of life. In fact the environmental quality of the existing human settlements in the area is already extremely poor.
2. Substantial parts of the area harbour wetlands (Figures 1-4), some of which are silted. These wetlands serve as important ecological functional units which not only hold huge amounts of surface run off from the surrounding residential areas and also substantial amount of water which cannot be drained into the river Yamuna during the monsoon season. In other words, these wetlands prevent inundation of the existing housing complexes in the area during monsoon season by holding surface run off from the surrounding areas – a key ecosystem service rendered by the wetlands. The wetlands also recharge the subsoil aquifer (unconfined aquifer) and thereby provide adequate ground water to the neighbouring human settlements throughout the year. These wetlands also serve as sinks for CO₂ and constitute habitats for a wide range of aquatic animals and plants. Consequently, these wetlands must be preserved. Unfortunately, some of the wetlands have already been drained for cultivation purposes and some are silted (Figures 2-4).
3. Most of the residential flats shown in the layout plan of the project area, indeed, are in the wetlands/ wetlands that have been drained and converted into agricultural fields (Figures 2-4). The site of the proposed Community Centre itself is an excellent functional wetland ecosystem (Figure 1). The sites marked on the layout map as wetlands in blue ink must be preserved as wetlands and should not be converted into residential flats.

In light of 1 to 3 above there is a need for change in land use in the Dheerpur Project area. The suggested option is: (i) to earmark the area marked in the green ink on the layout map for Institutional purpose, particularly for setting up of government funded institute of Higher Education; (ii) 20 to 30 percent of area marked 'C' in blue ink, which represents wetlands/ drained wetlands on the layout map, may be maintained as wetland preserves. These wetland preserves may be restored if necessary and may be maintained by the institution itself as natural heritage site in the same manner as done by many Universities/ Institutes in India and abroad to conserve the natural heritage; (iii) the area designated as 'A' in red ink may be used for DDA's activity; and (iv) the area marked 'D' in black ink has some buildings. However, it is important that encroachment of the said area should be avoided and necessary actions are needed/ to be taken against area already encroached, if any. The proper demarcation of the area can be provided followed by construction boundary wall/ protection wall.

This will result in a substantial improvement in the quality of life, minimize crowding effects and prevent environmental deterioration in the entire area and promote ecological sustainability and provide higher education facility to the neighbouring densely populated rural Delhi.



Figure 1: Wetland located at the proposed community center (A); the same wetland showing the presence of birds (B & C)



Figure 2: Wetland located at the proposed residential plots showing draining of water for agriculture (A); drained wetlands used for cultivation at the proposed residential flats (B); silted wetland at the proposed residential flats (C)



Figure 3: Wetland showing free floating plants at the proposed residential flats (A); silted wetland at the proposed residential flats (B); wetland converted into agricultural fields at the proposed residential flats (C)



Figure 4: Marsh showing birds at the proposed residential plots (A); the same marsh showing siltation (B); drained and converted wetlands into agriculture fields on the side of densely populated colony (C); partially converted wetland into agriculture field at the proposed primary school plot (D)