

**Site inspection report for diversion of 123.8253 hectare
of forest land for Development of Agra to Lucknow
Access Controlled Expressway (Green Field) Project**

Proposal no:

FP/UP/ROAD/12507/2015

USER AGENCY:

**UPEIDA
(Uttar Pradesh Expressways
Industrial Development Authority)**

The site inspection of the proposal was carried out by the undersigned {Brijendra Swaroop, CF (Central), Regional Office, MoEF&CC, Lucknow} on 4th, 5th, 6th and 16th November 2015. The list of officials present during site inspection date wise is provided below:

Table 1

Date	Officials Present	Districts Visited
04/11/2015	1. Mr. O P Gupta, PD Forest, UPEIDA 2. Mr. H M Tripathi, ACF, UPEIDA 3. Mr. A K Sharma, Executive Engineer, PIU 4, UPEIDA 4. Mr. O P Dixit, SDO Forest, Kanpur Nagar 5. Consultant for UPEIDA	Kanpur Nagar and Kannauj
05/11/2015	1. Mr. O P Gupta, PD Forest, UPEIDA 2. Mr. H M Tripathi, ACF, UPEIDA 3. Mr. B S Rawat, Executive Engineer, PIU 3, UPEIDA 4. Mr. Kanhaiya Patel, DFO Forest, Etawah 5. Mr. Mukesh Sharma, SDO Forest, Kanpur Dehat 6. Mr. D P Rajput, SDO Forest, Etawah 7. Consultant for UPEIDA	Etawah and Mainpuri
06/11/2015	1. Mr. O P Gupta, PD Forest, UPEIDA 2. Mr. H M Tripathi, ACF, UPEIDA 3. Mr. Kanhaiya Patel, DFO Forest, Etawah 4. Mr. Mukesh Sharma, SDO Forest, Kanpur Dehat 5. Mr. D P Rajput, SDO Forest, Etawah 6. Consultant for UPEIDA	Etawah and Mainpuri
16/11/2015	1. Mr. H M Tripathi, ACF, UPEIDA 2. Mr. VK Mishra, DFO Forest, Unnao 3. Mr. Udai Veer Singh, SDO Forest, Unnao 4. Mr. Naveen Kumar, Executive Engineer, PIU-5, UPEIDA 5. Mr. Manish Samtani, Project Manager, Larsen & Tubro	Unnao and Lucknow

*All the data as produced hereinafter is the convergence of perusal of available documents and other pertinent discussion during the course of site inspection and relevant data from Government sources.

**The report of the site inspection on prescribed Performa as per FCA guidelines.

Project location of Agra Lucknow Expressway



Project Location Map and Few Photographs

1. Short Narrative of the Project Proposal with brief time line of important events:

Proposed Expressway including Agra Link Road and Lucknow Ring Road is a Green Field alignment with majority of length passing through agricultural / rural land; hence no existing facilities are present there. Project is conceived to enhance the connectivity of the State Capital with National capital through a High Speed Corridor having control over access.

Total length of the project is 302.222 Km and divided in following 3 segments.

- Agra Link Road from Agra Ring Road to the proposed Expressway for a length of 2.634 Km (green field)
- Expressway from Agra to Lucknow for a total length of 289.900 Km (green field)
- Lucknow Link Road from the proposed Expressway to Lucknow Ring Road / SH 40 for a length of 9.688 Km (green field)

Proposed Right of Way has been taken as 110m for all the sections of expressway. Service roads on intermediate / staggered basis have been proposed throughout the length of the proposed expressway. 13 major bridges, 43 minor bridges, 8 Flyovers, 59 VUP, 137 PUPs, 3 ROBs, 1 ROB cum major bridge, 2 Toll Plazas and 4 Rest Areas are proposed to be constructed along the expressway. Flexible pavements are proposed for all throughout the road except at the toll plazas where rigid pavement is proposed. All geometric design aspects have been carried out as per the IRC and MoRT&H standards and specifications. Adequate warnings have been provided for maintaining continuity has been emphasized in the design. The design speed has been kept quite consistent, and speed difference between two consecutive curves is not exceeded. All horizontal curves are designed for 100kmph.

Estimated cost of the Project is INR 11, 52,600 Lakhs.

Expressway is passing through 10 districts - Agra, Firozabad, Mainpuri, Etawah, Auraiya, Kannauj, Kanpur, Unnao, Hardoi and Lucknow, whereas, Diversion of forest land is involved in 09 divisions- Agra, Firozabad, Mainpuri, Etawah, Auraiya, Kannauj, Kanpur, Unnao and Lucknow. The summary of the land requirement for the project is given in Table below.

- Area of Total Forest Land proposed for diversion- 123.8253 ha
- Reserve Forest land proposed for diversion- 109.2710 ha
- Protected Forest land proposed for diversion- 14.5543 ha
- Non-forest land required for this project- 3429.1814 ha in 9 forest divisions

Timeline of various important events associated with this proposal:

Table 2

Sr. No.	Events	Date
1	Project Inauguration	23/11/2014
2	Approval of ToR for Environment Clearance	07/10/2013
3	Contract awarding for construction	31/10/2014
4	Environment Clearance	03/11/2014
5	Forest Application by user agency	26/06/2015
6	Part II Approval from DFOs	31/08/2015
7	Part III approval from CCF / CF	9/09/2015
8	Part IV Approval from Nodal	29/09/2015
9	Part V Approval from State Government	30/09/2015
10	Regional Office	8/10/2015
11	REC after submission of detailed reply of queries (proposed date)	10/12/2015

Few basic facts about forest patches proposed for diversion:

Table 3

	Unit	
Total No. of Forest Segment / Village	Nos.	34
No. of Patches / Khasra	Nos.	208
Size of Smallest Patch / Khasra Gata No. 305, Gahrawan Village, Unnao	Ha	0.0002
Size of Biggest Patch / Khasra Gata No. 30, Nawabad Grunt Village, Unnao	Ha	6.2878
Area of Biggest Affected Village Bani Hardu Village, Etawah	Ha	12.3013
Area of Smallest Affected Village Pilkhana Rashidpur Village, Etawah	Ha	0.1111
Average Forest Area per Patch / Khasra	Ha per patch	0.589644
Average Forest Area per Segment / Village	Ha per Segment / Village	3.641921

2. Legal status of the forest land proposed for diversion.

Details of proposed forest area for diversion due to development of Agra to Lucknow Access Controlled Expressway (Green Field) Project:

Table 4

S. No.	Name of Division	No. of patches	No. of segments	Eco class	Crown density	Legal status	Area in Ha.
1	Agra	3	1	I	0.00	RF	6.8500
2	Firozabad	2	2	III	0.30	PF	0.3520
3	Mainpuri	3	3	III	0.10	PF	1.2320
4	Etawah	87	6	III	0.10	RF	43.0334
		2	2			PF	2.7515
5	Auraiya	10	1	III	0.30	RF	7.2090
		1	1			PF	0.2088
6	Kannauj	17	2	III	0.40	RF	8.6330
		2	2			PF	2.9252
7	Kanpur	2	2	III	0.40	PF	4.7568
8	Unnao	75	9	II	0.25	RF	39.6086
		2	2			PF	2.3280
9	Lucknow	2	1	III	0.10	RF	3.9370
Total		208	34				123.8253

*RF- Reserve Forest and ** PF-Protected Forest

2. Item wise break up details of the forest land proposed for diversion

The details are provided below:

Table 5

Sr.No	Component	Forest Land (ha)	Other Govt Land (except forest) (ha)	Private Land (ha)	Total Land (ha)	% forest land
1	Carriageway	120.3982	224.5608	3018.3075	3363.2665	3.6
2	Toll Plaza/Rest Area	0.9063	1.4340	47.1180	49.4583	1.8
3	Clover Leaf/Interchange	2.5208	8.3533	129.4078	140.2819	1.8
4	Other Amenities (if any)	0.0000	0.0000	0.0000	0.0000	0.00
	Total	123.8253	234.3481	3194.8333	3553.0067	3.50

3. Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof.

The proposal involves construction of two Toll Plazas and four Rest Areas along the entire length of expressway in the proposed 110 mts of right of way.

4. Total cost of project at present rates.

Estimated cost of the Project is INR 11, 52,600 Lakhs.

5. Wild- Life:

- As per the part II submitted from all nine divisions the proposed forest land diversion is not significant as per wild life point of view.
- The alignment of the expressway falls near to five wildlife sanctuaries but it does not fall within eco sensitive zone of the protected areas. A recommendation from Chief Wildlife Warden, Department of Uttar Pradesh in this regard is appended with the diversion proposal.
- It is pertinent to mention that last year i.e. winter of 2104, migration of a tigress was reported from the Unnao, Kanpur and Lucknow division from terai forests of Uttar Pradesh.

6. Vegetation:

The details of vegetation density forest division wise is provided in table at serial no. 2. The average vegetation density of all 34 segments and 208 patches of forest land of 9 division can be taken as 0.197 or 0.2 (falling into open forest type). Majority of the forest fall into Eco Class III with one exception that Eco Class I has been reported from Agra Social Forestry Division which in my opinion is erroneous and poor judgment of forest officials.

Girth class distribution of trees division wise which are proposed to be removed-
Table 6

S. No.	Division	Girth Size Distribution (cm)								Total
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	>70	
1	Agra	0	0	0	0	0	0	0	0	0
2	Firozabad	0	2	5	5	3	1	0	2	18
3	Mainpuri	0	14	12	4	3	0	0	1	34
4	Etawah	3400	24	51	22	12	7	6	12	3534
5	Auraiya	12823	0	0	0	0	0	1	3	12827
6	Kannauj	3027	0	0	0	0	0	0	0	3027
7	Kanpur	0	32	38	44	25	16	7	5	167
8	Unnao	42394	0	0	0	0	0	0	0	42782
9	Lucknow	2953	0	0	0	0	0	0	0	2953
Total		64597	72	106	75	43	24	14	23	65342

Number of trees to be felled of girth <60 cm = 65305 nos

Number of trees to be felled of girth above 60 cm= 37 nos

Important species:-

Anthocephalus cadamba, Holeptolia integerafolia, Accacia arabica, Syzygium cumini, Prosopis juliflora, Bombax ceiba, Dalburgia sisso, Mangifera indica, Moringa oliofera, Azadirachta indica, Aegel marmelos, Albizia procera, Lagerstomia lanceolata, Aegel marmelos, Zizyphus mauritiana, etc.

Effect of removal of trees on the general ecosystem in the area-

The forest area falling in alignment of the expressway is mostly small patches of reserve forests mainly exist on alkaline soil (Usar) where establishment of broad leave species is difficult. The pH of the soil in certain areas is very high reaching up to 11 or above. These forests are in there first stage of succession and provide ample cover, food, checks soil erosion and other eco-system services to the all life form existing in the area.

Though felling of large and mature trees is very less (only 37 no. of trees), viewing the locality factors; even the removal of bushy form of Prosopis juliflora will have an adverse effect on the ecosystem of the area. In order to mitigate the adverse impact provision of compensatory afforestation is incorporated in the proposal and additional penal compensatory afforestation in lieu of violations of Forest (Conservation) Act 1980 has also been recommended to the approving authority i.e. Regional Empowered Committee.

7. Compensatory afforestation:

There are 23 patches of compensatory afforestation in four divisions of the UP Forest Department having an extent of 153.933 ha. A total of 123.933 ha non forest land is part of compensatory afforestation patches. The detail of land proposed for compensatory of afforestation is provided below:

Table 7

S. No.	District / Division	Village / Location	Legal Status	Area in ha.	Remarks
1	Agra	Luhari	Gram Sabha	6.377	Non forest land for proposed for RF Diversion
		Nagla Nawai	Gram Sabha	30.000	
2	Firozabad	Fatehpur-Nasirpur	Gram Sabha	10.542	
		Atapur	Gram Sabha	6.514	
3	Mirzapur	Rajapura	Gram Sabha Land	70.500	
Sub Total				123.933	
4	Kannauj	Auser Van Block	Degraded Forest Land	30.000	Proposed for PF Diversion on double degraded forest land
Sub Total				30.000	
Grand Total				153.933	

(i) Whether land for compensatory afforestation is suitable for plantation and management point of view or not.

Site suitability certificate has been submitted by the concerned Divisional Forest Officers along with the forest land diversion proposal. During inspection proposed compensatory afforestation sites were not visited.

(ii) Whether land for compensatory afforestation is free from encroachment/ other encumbrances.

As per the DFOs report compensatory afforestation sites are free from encroachment and other encumbrances.

(iii) Whether land for compensatory afforestation is important from religious/ archaeological point of view.

Not reported.

(iv) Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not.

Five compact patches.

(v) Map with detail.

Enclosed with the proposal.

(vi) Total financial outlay.

The compensatory afforestation cost will be INR 4, 29, 15,676.

8. Whether proposal involves violation or Forest (Conservation) Act, 1980 or not. If yes, a detailed report on violation including action taken against the concerned officials.

The details of forest patches visited along with details of violation of FCA -1980 is provided in a table below:

Table 8

Details of Site Inspection from 4th November to 6th November 2015.

Sr No.	Division	Location	Legal status of the Forest	Khasra	Area (ha)	FCA-1980 Violation related issues.	Remarks
1	Kanpur	Agra – Lucknow Expressway Crossing NH 91 at Araul/Biti Haveli Village	Protected Forest	-	4.5959	A small patch is being used for pile foundation work.	The forest officials and project officials were told to stop the work. Initiation of proceedings as per provisions of FCA-1980 and IFA-1927 was instructed to the forest officials. As per the ocular estimation violation of forest area is approximately 0.5 ha
2		Agra – Lucknow Expressway Crossing Railway Track at Araul/Biti Haveli Village	Protected Forest	-	0.1609	No violation	
3	Kannauj	SH-21 Crossing near Faguha Village	Protected Forest	-	2.5732	A small patch has been used for dumping of earth to create formation.	As per the ocular estimation violation of forest area is approximately 0.25 ha
4	Etawah	Etawah Branch Canal at Baroli Kalan Village	Protected Forest	-	0.9240	Pile foundation has been constructed without FCA clearance.	The forest officials and project officials were told to stop the work. Initiation of proceedings as per provisions of FCA-1980 and IFA-1927 was instructed to the forest officials.
5		Niwasai Village	Reserved Forest	73	0.4003	Civil engineering structure like cross drainage work etc has already been constructed.	Entire three patches should be accounted for violation of FCA. Approximately 20 numbers of trees mainly of Prosopis Juliflora was felled.
6		Niwasai Village	Reserved Forest	103	0.5279		
7		Wunwa Santoshpur Village	Reserved Forest	2875	0.3008		
8		2869		0.5173	No violation		
9	Mainpuri	Agra Lucknow Expressway crossing Etawah Mainpuri Rd (SH-83) near Karhal Village	Protected Forest	-	0.7000	A small patch has been used for dumping of earth to create formation.	

Details of Site Inspection on 16th November 2015.

Table 9

Sr No.	Division	Location	Legal status of the Forest	Khasra	Area (ha)	FCA-1980 Violation related issues.	Remarks
1	Unnao (Range Hasanganj)	Talasarai	Protected Forest	1947	0.2969	No violation was seen during site inspection	
2		Pilakhna Rashidpur	Reserve Forest	199	1.807	-do-	
3		Aliyarpur	Reserve Forest	817	2.1537	-do-	
4			Reserve Forest	777	0.1617	-do-	
5			Reserve Forest	769	0.6874	-do-	
6			Reserve Forest	598	0.0120	-do-	
7			Reserve Forest	599	0.0638	-do-	
8			Reserve Forest	600	0.1057	-do-	
9			Reserve Forest	601	0.0377	-do-	
10			Reserve Forest	632	0.6900	-do-	
11			Reserve Forest	694	0.0382	-do-	
12			Reserve Forest	569	0.4183	-do-	
13			Reserve Forest	568	1.8367	-do-	
14			Maitriya/B aratikheda	Reserve Forest	918	0.9358	-do-
15		Reserve Forest		1029	3.4627	-do-	
16	Lucknow	Beharu	Reserve Forest	1229 & 1375	3.9696	-do-	

- As per the ocular estimation; the forest area which comes under violation is around 5 ha of the sites visited during site inspection.
- Few photographs of field visit are provided in annexure 'A' of the site inspection report.

9. Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Government or not.

Not applicable in this proposal.

10. Reclamation Plan

Not applicable in this proposal.

11. Details on catchment and command area under the project.

Not applicable in this proposal.

12. Cost benefit ratio:

- As per the guidelines and parameters fixed by MoEF&CC the benefit cost ratio of the proposal is 3.54.
- On financial parameters the return period of the project is 17 years at IRR (internal rate of return) 13.83%.

13. Recommendations of the Principal Chief Conservator of Forest/ State Government.

The forest land diversion proposal has been recommended by the State Government.

14. Utility of the project.

The perceived benefits of the project can be summarized in following points:

- ✓ The Agra-Lucknow Expressway Project will extend the connectivity of the State Capital to National capital with High Speed Corridor leading to reduced travel time and fuel consumption.
- ✓ The alignment is almost parallel to Dedicated Freight Corridor being created by Indian Railways for faster movement of goods. This will link agrarian goods with better markets in country as well as with export markets.
- ✓ The Kannauj and Firozabad roads cross the proposed expressway. Thus the expressway eventually will provide better connectivity to Kannauj, Kanpur and Firozabad which are industrial hub for various industries like glass work, perfume, leather etc. with the potential markets.
- ✓ The road connects Agra, major tourist spot to the State Capital Lucknow after passing through the 10 district
- ✓ The proposed expressway links the trapezium circuit of Uttar Pradesh Tourism.
- ✓ Savings in vehicular operating and maintenance cost.
- ✓ Benefits to trade especially in movement of perishable goods.
- ✓ Access to new Industrial Areas which are proposed in the Master Plans of the State.
- ✓ Overall enhancement of socio-economic condition of the area along the project corridor.

15. Numbers of Scheduled Caste/Scheduled Tribes to be benefited by the project.

It can be safely presumed that whole state of Uttar Pradesh will be benefitted by implementation of this project. The population of Uttar Pradesh as per census 2011 data is 19, 95, 81,477 and out of which 3, 51, 48,377 is the population belonging to Schedule Caste and 11, 34,273 is the population belonging to Scheduled Tribe.

16. (i) Whether land being diverted have any socio-cultural/religious value.

Not reported as well as not observed during site inspection.

(ii) Whether any sacred grove or very old growth trees/forests exist in the areas proposed for diversion.

Not reported as well as not observed during site inspection.

(iii) Whether the land under diversion forms part of any unique eco-system.

Not applicable.

17. Situation with respect to any protected area.

A map showing respective alignment with respect to protected area on Survey of India is appended with the project proposal in the revised form. is site inspection report.

18. (i) Any other information relating to the project:

NIL

(ii) Muck Disposal Scheme:

As per the discussion with project officials at site it was clarified that the expressway alignment has been fixed at an elevated grade, therefore, most of the sections are in fill.

19. Recommendations of the site inspecting officer:

One of the main issues noticed is lack of involvement of forest officials in planning phase while freezing the alignment for expressway to minimize the forest area required for diversion and according adequate consideration to different alternatives on forest land requirement viewpoint. The recommendations regarding forest land diversion proposal for Agra Lucknow Expressway is summarized in following points:

- (i) There is a need of re inspection by respective Conservator of Forests of all forest land patches proposed for diversion under their jurisdiction to assess the extent of violation. This is due to the fact that the undersigned has visited only limited number of patches (25 in numbers) whereas total 208 patches of forest land are involved in the diversion proposal.
- (ii) A penal compensatory afforestation scheme should be submitted after compilation of field reports regarding violated forest areas. It is proposed to the approving authority that at the rate 5 to 10 times of the forest area under violation should be the magnitude of penal compensatory afforestation scheme.
- (iii) In order to maintain landscape integrity and requirement of wildlife migratory route; it is recommended that any intersection of the expressway alignment with reserve forests having width greater than 100 mts should preferably be taken up on elevated structures providing safe underpasses for wildlife migration.

- (iv) The alignment of the expressway passes through rural heartland of Uttar Pradesh. Around most of the patches of forest land proposed for diversion there exists rural population which is dependent for fuel wood and fodder on them. In order to mitigate the loss of fuel wood and fodder it is proposed that all such villages shall be provided with fuel wood and fodder plantations in proportion with the forest land which will be lost due to diversion and dependent population of the village.
- (v) The greening/afforestation/avenue creation of expressway should be in conformity with the Indian Road Congress (IRC) guidelines and this shall be planned and executed in consultation and supervision of the field officials of the Department of Forests, Uttar Pradesh.

Conservator of Forests (Central)
Regional Office, Ministry of Environment, Forests & Climate Change
Government of India, Lucknow

Date: 1st December 2015

Place: Lucknow

ANNEXURE 'A'



Photographs of few forest patches in Etawah Social Forestry Division



Construction of pile foundation in canal side forest patch



Felling of *Prosopis juliflora* in a forest patch



Construction of Cross Drainage Work



An untouched forest patch in Etawah Social Forestry Division



Road Side Protected Forest Patch of Kanpur Dehat Social Forestry Division



Site Inspection of Unnao Social Forestry Division

