



# Environmental Monitoring Report

---

Project Number: 40648-034  
May 2017

Period: July 2016 – December 2016

## IND: Infrastructure Development Investment Program for Tourism - Tranche 3

Submitted by: Program Management Unit, Government of Uttarakhand, Dehradun

This report has been submitted to ADB by Program Management Unit, Government of Uttarakhand, Dehradun and the Asian Development Bank and is made publicly available in accordance with ADB's Public Communications Policy (2011). It does not necessarily reflect the views of ADB.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Asian Development Bank

res

for logging p/s  
NK/SM.



Govt. of Uttarakhand

**Program Management Unit**  
**Infrastructure Development Investment Program for Tourism**  
(ADB Assisted – Loan No. 2833, India)  
**Government of Uttarakhand**

Pandit Deendyal Upadhyay Paryatan Bhawan,  
Near ONGC Helipad Garhi Cantt, Dehradun -248003  
Tel: 91-135-2559987, Fax: 91-135-2559988 E-mail: utdb.pmu@gmail.com



Ref: 5159/2-10-ADB IDIPT/370/2016-17

Date: 20.05.2017

To

Country Director,  
Indian Resident Mission (INRM),  
Plot no -4, San Martin Marg, Chanakyapuri,  
New Delhi 110021, PB No-53311 (HPO)



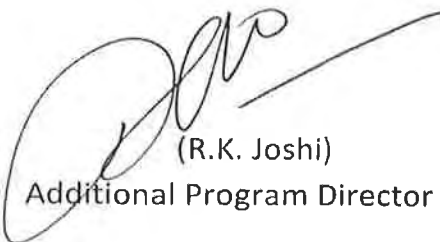
**Sub: Loan No. 3223 IND- IDIPT, UK Submission of Semiannual Safeguard Monitoring Report (Environment), for July – December, 2016**

Respected Sir,

Please find the Semiannual Environment Monitoring Report for your kind perusal and approval.

Yours Sincerely

Encl.:- As above

  
(R.K. Joshi)  
Additional Program Director



left copy recd 22.05.17

## **Semi – Annual Environmental Monitoring Report**

**Loan No: 3223 IND**

**Period: July to December 2016**

**IND: Infrastructure Development Investment Programme for Tourism,  
Uttarakhand  
(Tranche –III)**

**Prepared by Dept. of Tourism, Government of Uttarakhand for Asian  
Development Bank**

**May, 2017**

This Semi – Annual Environmental Monitoring Report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

## Table of Contents

1. INTRODUCTION .....	1
2. COMPLIANCE STATUS.....	26
3. COMPLIANCE STATUS WITH NATIONAL/ STATE/ LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS .....	27
4. COMPLIANCE STATUS WITH THE ENVIRONMENTAL COVENANTS AS STIPULATED IN THE LOAN AGREEMENT .....	29
5. COMPLIANCE STATUS WITH ENVIRONMENT MANAGEMENT AND MONITORING PLANS AS STIPULATED IN THE ENVIRONMENTAL DOCUMENTATION AS AGREED WITH ADB.....	30
6. STATUS OF IMPLEMENTATION OF ENVIRONMENT MANAGEMENT PLAN.....	33
7. APPROACH & METHODOLOGY ENGAGED FOR ENVIRONMENTAL MONITORING OF THE PROJECT.....	71
8. MONITORING OF ENVIRONMENTAL RECEPTORS/ ATTRIBUTES .....	71
9. IMPLEMENTATION OF ENVIRONMENTAL MONITORING PLAN.....	73
10. PUBLIC CONSULTATION DETAILS .....	98
11. ANY OTHER ENVIRONMENTAL ASPECTS, IMPACTS OBSERVED DURING IMPLEMENTATION WHICH WERE NOT COVERED EARLIER .....	102
12. DETAILS OF COMPLAINTS RECEIVED FROM PUBLIC AND ACTION TAKEN THEREOF TO RESOLVE .....	102
13. FOLLOW UP ACTIONS AND CONCLUSIONS .....	102

### List of Table

TABLE 1: PROJECT PROGRESS IN THE REPORTING PERIOD TILL DEC, 2016 .....	3
TABLE 2: WORK DETAILS AND RISKS FOR SUB PROJECTS .....	4

TABLE 3: STATUS OF COMPLIANCE WITH EARF/ADB PROCEDURES .....	26
TABLE 4: STATUS OF ENVIRONMENT, FOREST AND OTHER CLEARANCE.....	27
TABLE 5: STATUS OF COMPLIANCE WITH ENVIRONMENTAL LOAN COVENANTS.....	29
TABLE 6: EMP IMPLEMENTATION STATUS.....	30
TABLE 7 (I): EMP MONITORING STATUS CHART- DEVELOPMENT OF TOURISM INFRASTRUCTURE IN KARTIKEYA SWAMI CIRCUIT (LOT-1) (TUNGESHWAR & DURGADHAR TEMPLE).....	34
TABLE 7 (II): EMP MONITORING STATUS CHART- DEVELOPMENT OF TOURISM INFRASTRUCTURE IN KARTIKEYA SWAMI CIRCUIT (LOT-2) (KARTIEKYA SWAMI TEMPLE)...	36
TABLE 7 (I): EMP MONITORING STATUS CHART- RURAL TOURISM IN DISTRICT TEHRI AND UTTARKASHI .....	39
TABLE 7 (IV): EMP MONITORING STATUS CHART- CONSERVATION OF CULTURAL HERITAGE AND URBAN PLACE MAKING IN NAINITAL LOT-1.....	45
TABLE 7 (V): EMP MONITORING STATUS CHART- RESTORATION AND ADAPTIVE REUSE OF ALMORA FORT (RANI MAHAL) .....	49
TABLE 7 (VI): EMP MONITORING STATUS CHART- RESTORATION AND ADAPTIVE REUSE OF CHAMPAWAT FORT (BANASUR) .....	53
TABLE 7(VII): EMP MONITORING STATUS CHART – RESTORATION AND ADAPTIVE REUSE OF PITHORAGARH FORT, PITHORAGARH .....	57
TABLE 7 (VIII) : EMP MONITORING STATUS CHART- CREATION OF PEDESTRIAN ROUTE FOR PILGRIMS AND TOURISTS IN HARIDWAR .....	60
TABLE 7(IX): EMP MONITORING STATUS CHART- DEVELOPMENT OF TOURISM INFRASTRUCTURE IN SEM MUKHEM.....	65
TABLE 8: PARAMETERS AND METHODOLOGY FOR ENVIRONMENTAL MONITORING .....	72
TABLE 9 (I): IMPLEMENTATION OF ENVIRONMENTAL MONITORING PLAN- FOR PROJECTS UNDER DSCDEHRADUN.....	73

TABLE 9 (II): IMPLEMENTATION OF ENVIRONMENTAL MONITORING PLAN- FOR PROJECTS UNDER DSC KOTDWARA .....	82
TABLE 9 (III): IMPLEMENTATION OF ENVIRONMENTAL MONITORING PLAN- FOR PROJECTS UNDER DSC BHIMTAL.....	85
TABLE 10(I): PUBLIC CONSULTATION MEETINGS FOR TRANCHE III SUB-PROJECTS UNDER DSC DEHRADUN .....	98
TABLE 10(II): PUBLIC CONSULTATION MEETINGS FOR TRANCHE III SUB-PROJECTS UNDER DSC KOTDWARA .....	99
TABLE 10(III): PUBLIC CONSULTATION MEETINGS FOR TRANCHE III SUB-PROJECTS UNDER DSC BHIMTAL.....	101
ANNEXURE: 1: PHOTO ILLUSTRATION .....	103
ANNEXURE: 1(I): PHOTO ILLUSTRATION OF WORK PROGRESS- DSC DEHRADUN.....	103
ANNEXURE: 1(II): PHOTO ILLUSTRATION OF WORK PROGRESS- DSC KOTDWAR .....	105
ANNEXURE: 1(III): PHOTO ILLUSTRATION OF WORK PROGRESS- DSC BHIMTAL.....	106
ANNEXURE – 2: ENVIRONMENTAL MONITORING REPORTS.....	108

## **1. Introduction**

### **Overall Project Description**

1. The Infrastructure Development Investment Program for Tourism Financing Facility (the Facility) will develop and improve basic urban infrastructure and services in the four participating states of Himachal Pradesh, Punjab, Uttarakhand and Tamil Nadu—to support the tourism sector as a key driver for economic growth. It will focus on: (i) strengthening connectivity to and among key tourist destinations; (ii) improving basic urban infrastructure and services, such as water supply, road and public transport, solid waste management and environmental improvement, at existing and emerging tourist destinations to ensure urban amenities and safety for the visitors, and protect nature and culture-based attractions. Physical infrastructure investments will be accompanied by: (iii) capacity building programs for concerned sector agencies and local communities for better management of the tourist destinations and for more active participation in the tourism-related economic activities, respectively.
2. The proposed Project targets enhanced economic growth and provision of livelihood opportunities for local communities through tourism infrastructure development with a focus on preservation and development of natural and cultural heritage and incidental services. The Project supports the state of Uttarakhand to develop the tourism sector as a key driver for economic growth.
3. The Executing Agency (EA) for the Investment Program is Dept. of Tourism, Govt of Uttarakhand. The Loan Agreement and Project Agreement for the IDIPT, Uttarakhand is 3223-IND. Project Implementation Unit have been established in three towns respectively (Dehradun, Bhimtal and Kotdwar) for implementation of sub-projects. Design and Supervision Consultants (DSCs), has already been established in three towns for designing the Infrastructure, managing the tendering of Contractors and supervising construction, and providing support to the PIUs.

### **Outputs of the Project**

4. The outputs of the Project are as follows:

**Component 1: Urban Infrastructure and Service Improvement**

**Component 2: Improved connectivity**

**Component 3: Quality Enhancement of Natural and Cultural Attractions**

**Component 4: Greater participation by local communities**

**Component 5: Capacity Development, Community Participation and Project Management**

**Environment Category:**

5. The project under IDIPT was categorized as Environment Category “B”, according to ADB’s Safeguard Policy Statement (2009). All the subprojects under execution have been categorized as category 'B'.

**Environment Performance Indicators, if any:**

6. For effective monitoring, selected environmental parameters have been identified as indicators which may be qualitatively and quantitatively measured and compared over a period of time in order to assess/ ensure the compliance to environmental management plans (EMPs). The environmental performance indicators selected are physical, biological and social characteristics identified as most important in affecting the environment at critical locations at all the sub projects. The parameters identified as performance indicators are:
  1. Compliance with environmental management and monitoring plan
  2. Compliance to State/ National environmental regulations.
  3. Monitoring of ambient air quality, water quality and noise levels and comparison with baseline environmental quality and State/ National Standards.

**Overall project progress, agreed milestones and Implementation schedule**

7. Construction works for the following sub projects are in progress and shown in Table 1.



Table 1: Project Progress in the Reporting Period till Dec, 2016

Sl. No.	Package Ref No.	General Description Goods or Works	Contract Signing Date and Start date	Name of the Contractor	Contract Value	Contract period
1	UK/IDIPT-III/DDN/01 Lot1	Development of Tourism Infrastructure In Kartikeya Swami Circuit (Lot-1) (Tungeshwar&Durgadhar Temple)	26.02.2016	M/s Aaradhya Engineers	INR 7.59 Cr.	24 months
2	UK/IDIPT-III/DDN/02	Development of Tourism Infrastructure in Kartikeya Swami Circuit (Kartikeya Swami Temple)	LOA issued 23.05.16 Work started 07.07.2016	M/S APS Structures Private Ltd	INR 3.97 Cr.	24 months
3	UK/IDIPT-III/DDN/03	"Conservation & Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand"	LOA issued 23.05.16 Work started 02.08.2016	M/S Navya Associates in JV with Agrawal Brothers	INR 15.26 Cr.	24 months
4	UK/IDIPT/III/B HT/01	Conservation of Cultural Heritage and urban place making in Nainital Lot-1	19-10-2015	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New Delhi - 110019, India	INR 38.52Crore	24 months
5	UK/IDIPT/III/B HT/03	Restoration and adaptive reuse of Almora Fort (Rani Mahal)	19-10-2015	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New Delhi - 110019, India	INR 29.90 Crore	24 months
6	UK/IDIPT/III/B HT/05	Restoration and adaptive reuse of Champawat Fort (Banasur)	19-10-2015	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New Delhi - 110019, India	INR 15.53Crore	24 months
7	UK/IDIPT-III/KOT/01	Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar	22/07/2015	M/s SS InfratechJv, Tikola Nagar, Roorkee, Haridwar 247670	INR 22.38 Cr.	24 months
8	UK/IDIPT-III/KOT/02	Development of Tourism Infrastructure in SemMukhem	22/08/2015	M/s Mangalam and Construction Company in JV with Sunil Garg and Company, Kesarganj, Meerut.	INR 10.18 Cr.	24 months
9	UK/IDIPT/III/BH T/07	Restoration and Adaptive Reuse of Pithoragarh Fort Phase II	05/07/2016	M/S COX Infratech Private Limited in JV with Conaech Associates	INR 27.11 Cr.	24 months

8. Work Details In the reporting period has been shown in Table 2.  
Work progress of 09 packages is reported henceforth.

Table 2: Work Details and Risks For sub projects

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
UK/IDIPT-III/ DDN/01 Lot1  Development of Tourism Infrastructure In Kartikeya Swami Circuit (Lot-1) (Tungeshwar, Durgadhar Temple)	Aradhya Engineers	Durgadhar Temple precinct  Upgradation of infrastructure around the approach area of the temple, including drinking water facilities and sanitation  Parking facility and vehicular approach along with adjoining retaining walls  Solid waste management  Pathway development with railings & protection wall wherever necessary and signage and seating and lighting  Temple entrance arch  Improvement of the temple complex in terms of restructuring of the newly added temporary structures and overall landscaping to facilitate better movement and space for gathering of pilgrims and tourists  Lodging facilities with rooms and dormitories and toilet block at the rear side	22.01.2016	21.01.2018	Durgadhar:- <b>Retaining wall completed</b>  <b>Path under progress</b>  <b>Guest house under construction</b>  <b>Toilet under progress</b>  TUNGESHWAR:- RCC frame structure work completed up to roof level Brick work of toilet block work is in progress, Retaining wall work for pathway work is in progress.	23%	Not visualized till now	Nil	Weather disturbances during monsoon season may delay the work progress

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<p>of the temple complex and a langar hall</p> <p>Area confinement with edge wall , viewing decks etc</p> <p>Restoration of Temple premises</p> <p>Construction of C.C road(main road to Temple,400 mtr length with drain</p> <p>Development of Solar lighting and Fire Fighting work.</p> <p>Capacity building for temple committee members for O&amp;M activities.</p> <p>Tungeshwar Temple precinct</p> <p>Entrance area development with appropriate signage</p> <p>Development of the 1.5km long pathway with railing to the main temple, increase in width and edge protection wherever required.</p> <p>Seating arrangements , viewing decks and toilet facilities</p> <p>Signage along the pathway and Temple premises.</p>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		Improvement in the temple precinct Construction of entrance gate Lodging facilities and langar hall Development of Solar lighting and Fire Fighting work Improvement in the drinking water facility for the approach areas Capacity building for temple committee members for O&M activities.							
UK/IDIPT/III/DDN/02  Kartikeya Swami Temple	APS Pvt limited	<b>Civil Work</b> Pedestrian Pathway Sitting Arrangement Railing at Temple Premises Pathway Renovation Existing Dharamshala Rest Shelter Retaining & Breast Walls View Point	07.07.16	06.07.18	<b>Path way under construction</b>  <b>Retaining wall construction</b>	18.5%		Appropriate measures has been taken for fulfillment of the objectives	

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		Pre-fabricated Small Size Toilet Entrance Gate Renovation of Lodging Facility Furniture for Lodging Facility Camping Site development Renovation of Main Temple Solar Lighting Fire Fighting works Additional items Renovation of Existing Toilet Toilet Block Provision of Pathway Covering Shelter Directional Signage Informative Signage Solar Power Plant (2KW) Hill View location pointer model <b>Electrical Work (Internal/External)</b> <b>From Provisional Sums</b> Water Supply Connection Electricity Connection Rain Water Harvesting Capacity building for Temple Committee members for O&M activities							
UK/IDIPT/III/DDN/03	M/s Navya Associates JV with M/s Agarwal Brothers	<b>Name of Village</b> <b>Tungnath</b>	02.08.16	01.08.18	1.Kabiltha: pathway under construction  2.Mukhwa: path way under construction, RR wall construction, bhogshala	5.50%			
		<b>Proposed Hardware Components</b> Restoration of Temple through removal of incongruent additions and preservative coating and foundation retrofitting of main temple							

Name & No. of Package	Name of the contractor	Listing of works under the package		Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
				Starting date	Date of Completion					
			Removal and reconstruction of bulged retaining walls			construction				
			Shivalinga water/Rain water disposal system of the temple/premises			3.Kanakchouri: path way and retaining wall under construction				
			Up gradation of main entrance gateway			4.Phalasi: Toilet under construction				
			Improvement of pathway upto new gateway structure			Other sites work not yet started				
		Kaviltha	Upgradation of Pathway							
			Construction of Guest House							
			Renovation of KalidasSmarak& Community centre							
			Repair of existing Parking facility							
			Repairing of Existing Water source							
			Renovation of PanchayatBhawan							
			Landscaping							
			Informative Signage							
			Directional Signage							
			Renovation of Existing gate and Railing							
			Furniture For Kaviltha Guest House and Kaviltha							

Name & No. of Package	Name of the contractor	Listing of works under the package		Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
				Starting date	Date of Completion					
			Library							
			Solar light and Water Heater System							
		Phalasi	Up gradation of Pedestrian Pathway and providing retaining & breast Wall							
			Construction of Toilet Block							
			Directional and Informative Signage							
			Solar Lighting							
			Railing							
			Sitting Benches							
		Durgadhar (Bora)	Up gradation of Pedestrian Pathway and covering shelter							
			Construction of Toilet Block							
			Directional and Informative Signage							
			Solar Lighting							
			Railing and Sitting Benches							
			Renovation of Existing Panchayatbhawan							
		Harsil	Up gradation of Pedestrian Pathway and Pathway Covering Shelter and Construction of Retaining							

Name & No. of Package	Name of the contractor	Listing of works under the package		Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
				Starting date	Date of Completion					
			Walls							
			Upgradation of existing Sitting Arrangement							
			New Railing							
			Renovation of Existing Entrance Gate							
			Renovation of Existing Rain Shelter, Temple Premises, Parking Area and Water Tank							
			Informative and Directional Signage							
			Beautification of Existing Helipad							
			Protection wall for Camping Site							
			Solar Lighting							
		Mukhwa	Upgradation of existing Pedestrian Pathway and Construction of Pathway Covering Shelter, retaining and breast wall							
			New Sitting Arrangement							
			Renovation of Existing Panchayat Bhawan & Temple Premises							
			Construction Parking facility							
			Entrance Gate							
			Toilet Block -							



Name & No. of Package	Name of the contractor	Listing of works under the package		Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
				Starting date	Date of Completion					
			Directional and Informative Signage							
			Railing							
		Kanakcho ri	Upgradation of Pedestrian Pathway and Pathway Covering Shelter							
			Retaining & Breast Wall							
			Toilet Block - Small							
			Directional and Informative Signage							
			Solar Lighting							
			Sitting Bench							
		Niti	Construction of Community Centre							
			Renovation of open air theater and compound wall							
			Construction of Parking facility							
			Upgradation of gram panchayatbhawan							
			Directional and Informative Signage							
			upgradation of village Pathway with KC drain							
			Seating Benches							
			Toilet							
			Upgradation of existing View Points							
			Provision of Dust Bins							

Name & No. of Package	Name of the contractor	Listing of works under the package		Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
				Starting date	Date of Completion					
			Solar Light Erection of Glass House (View points) Lata No Hardware components proposed							
UK/IDIPT/III/BHT/01 Lot 1  Conservation of Cultural Heritage and urban place making in Nainital Lot-1	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New Delhi - 110019, India	Proposed Scope as per IEE (DPR)  1. Promenade development around Nainital lake <ul style="list-style-type: none"><li>Mechanical car parking</li><li>Development of Children's park</li></ul> 2. Enhancement of Nainital Lake Heritage Precinct <ul style="list-style-type: none"><li>Restoration of Municipal Corporation, DSA Pavilion, New Club</li><li>Development of Gandhi gram, Takula</li><li>Façade improvement of Dam wall at Mallital,</li><li>Façade restoration and illumination of Govt. owned heritage buildings (Bishop Shaw, Municipal Library, Catholic church, Methodist Church</li><li>Provision of Public Amenities and facilities at appropriate location in Nainital area precinct</li></ul>		19.10.2015	18.10.2017	1. Library. Roofing work and framing wooden column 2. DSA Flat- Roofing work FF verandah strengthen GF 3 Methodist church- Roofing work GF and fasade work front side 4. Catholic church- Roofing work railing RCC column and pointing work 5. DSB chapel- Pointing work 6. Municipal building-cutting for Window bracket. 7. National hotel toilet-Tile work internal 8. Cheenababa toilet-Plaster work	6%		Nil	Cooperation of LDA is integral for fulfillment of project objectives

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>Integrated signage and interpretation in lake precinct</li> <li>Reclamation of public and open spaces in the lake precinct</li> <li>Removal and demolition of obsolete, damaged street furniture and structures</li> <li>Rickshaw stand</li> <li>Integrated stone paved pedestrian access and pathways with adequate plantation</li> <li>Street furniture</li> <li>Weather shelters</li> <li>Heritage type railing and integrated lake edge lighting along lake edge</li> <li>Improvement of Heritage Trekking Trail               <ul style="list-style-type: none"> <li>Nature Trail 1 - Land's End &amp; Tiffin Top</li> <li>Nature Trail 2 - Naina Peak</li> </ul> </li> </ul> <p>(Trail 1- Tiffin Top – Lands End Trail: Length 4.5 Km From Ayar Jungle Camp to Lands End + 1.17 Kms from LandsEnd to Barapatthar Trail 2 – TankiNaina Peak: Length 3 Km starting at Tanki) Repair of damaged pathways Rough stone paving of steep, slushy stretches</p>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<p>Provision of railings at outer sides in vulnerable stretches</p> <p>Wayside furniture at pause points</p> <p>Rain shelters at viewing points</p> <p>Camping sites</p> <p>Provision of portable toilets at appropriate points [where water pipeline already available]</p> <p>Signages [informative and regulatory]</p> <p><b>Out of above proposed scopein the IEE (based on DPR) only the components listed below are being taken up:</b></p> <p><b>Restoration of</b></p> <ul style="list-style-type: none"><li>• Catholic Church</li><li>• Methodist church</li><li>• Bishop Shaw</li><li>• Library Building</li><li>• Municipality Building</li><li>• DSA Flat</li><li>• Gandhi Ashram- Takula</li><li>• New Club</li><li>• DSB College Chapel</li><li>• Treatment of Dam Wall</li><li>• Repaving of Upper Mall</li><li>• Rickshaw Stand</li><li>• Lake Front Development</li></ul>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>• Park Development</li> <li>• Railing &amp; Band Stand</li> <li>• Construction of Toilets in Nainital- Cheena baba and National Hotel</li> <li>• Improvement of High mass light Electricity</li> <li>• Nature Heritage Trail:               <ul style="list-style-type: none"> <li>○ Wayside furniture at pause points</li> <li>○ Rain shelters at viewing points</li> <li>○ Camping sites</li> <li>○ Provision of portable toilets at appropriate points (water pipeline available)</li> <li>○ Signages (informative &amp; regulatory)</li> </ul> </li> </ul> <p>Mechanical car parking component shall be taken up in separate package UK/IDIPT/III/BHT/01 Lot 2</p>							
UK/IDIPT/III/BHT/03  Restoration and adaptive reuse of Almora Fort (Rani Mahal)1  The subproject	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New	<b>Scope as per IEE:</b> Restoration of the historic sites: Ram Shila Temple and the MallaMahal or Fort Nanda Devi Complex 1.Revitalization of the entire precinct as a public space for experiencing regional history and culture, through creation of facilities such as: <ul style="list-style-type: none"> <li>• Develop cobblestone-paved courtyard</li> </ul>	19-10-2015	18-10-2017	Basement area roof slab complete , Ground floor roof slab in progress, Stair case 2nd flight shuttering on progress 5 Reinforcement work in ground floor slab ½	14.62%%	No Change		

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
<p>was bid out in 02 packages</p> <p>(i) Rani Mahal UK/IDIPT/III/BHT/03</p> <p>(ii) MallaMahalUK/IDIP/III/BHT/06</p>	Delhi - 110019, India	<p>as a performance arena.</p> <ul style="list-style-type: none"> <li>• Create a Museum on Kumaon culture in the main building of the MallaMahal</li> <li>• Create a Himalayan Art Gallery and nature interpretation centre in the Rani Mahal,</li> <li>• Restoration of the historic site of Ram Shila Temple</li> <li>• Creation of craft demonstration areas.</li> <li>• Removal or concealment some buildings through strategic landscaping and foliage coverage of structures</li> <li>• Create facilities in Almora town to enable it to emerge as a complete destination</li> <li>• Improve all three access routes that lead up to the fort and temple</li> <li>• Improve accessibility, especially for the differently-abled through the setting up of elevators leading from bazaar to the site.</li> <li>• Improve basic tourist and pilgrim facilities and amenities</li> <li>• Improve vehicular parking facilities for about 100 vehicles in the town.</li> <li>• Improve basic environmental services like solid waste and wastewater management.</li> <li>• Enforcing strict standards for cleanliness and upkeep. Improving</li> </ul>			part complete ,				

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<p>tourist/visitor wayside amenities along approximately 10 km of vehicular access. Improving access to places of tourist/pilgrim attractions by way of 15 km of connectivity improvement inclusive of roadside infrastructure and improved signage.</p> <ul style="list-style-type: none"> <li>• Improving about 4 km of pedestrian environment connecting the heritage site with different parts of the town.</li> <li>• Training and capacity building</li> </ul> <p>2. Construction of District Collectorate office at Porth Free Estate near VikasBhavan. Construction of G + 4 building with office, parking within Govt. land of 2500 sq m</p> <p>□ For Almora District Collectorate office, Water supply is planned from municipal water supply and water line will be extended to proposed building.</p> <p>□ For waste water – discharge 4 nos. of soak pit and 4 nos. of septic tank will be utilized. In total 64 nos. of toilet, 32 nos. urinal will be constructed</p> <p>□ Solid waste will be stored in bins of adequate capacity from where collection will be done by Almora Nagar Palika</p>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<p>Out of above proposed scope in the IEE (based on DPR) only the components listed below are being taken up:</p> <p>(i) Rani Mahal package has been awarded and scope is</p> <ul style="list-style-type: none"> <li>• Restoration of Rani Mahal</li> <li>• Restoration of Courtyard+ Ramshila Temple</li> <li>• Restoration of Craft Centre + Toilet</li> <li>• Restoration of SDM office</li> <li>• Restoration of Fort Walls</li> <li>• Signage Plan</li> <li>• Civil work of Collectorate building in Almora</li> <li>• Site Development and Landscaping</li> <li>• Sanitary&amp;</li> <li>• Electrical Works</li> </ul> <p>Following works shall be taken up in (ii) MallaMahal package</p> <ul style="list-style-type: none"> <li>• Museum on Kumaon culture in MallaMahal and</li> </ul>							



Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>Removal or concealment some buildings through strategic landscaping and foliage coverage of structures</li> </ul>							
Restoration and adaptive reuse of Champawat Fort (Banasur)	M/s Simplex Project Limited 407, Skipper Corner, 88 Nehru Place, New Delhi - 110019, India	<p><b>1. The scope of this sub-project includes:</b></p> <p>a) <b>Restoration of the historic sites:</b> Rajbhunga Fort and Banasur Forts, or collectively Champawat Forts, Restoration of GoluDevta temple (3 km from the Champawat fort) and Goraknath temple (40 km from Champawat)</p> <p>b) <b>Revitalization of the entire precinct</b> as a public space for experiencing regional history and culture, through creation of facilities.</p> <p>(i) <b>Rajbhunga Fort:</b></p> <ul style="list-style-type: none"> <li>Removal of existing and undesirable structures</li> </ul>	19.10.15	18.10.17		19.82%	Components of GoluDevta and Guru Gorakhnath temple have been dropped		

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>Remodeling and reconstruction of existing structures:Old Fort &amp;Tehsil Office and SDM Office, Durga Devi Temple, Courtyard and Ramparts.</li> <li>Providing Tourist Facilities and Amenities at fort like Ticket Counter, Tourist Interpretation Centre, Cafe &amp; Shop, Souvenir Shop, Library, Toilet Block, Creation of link walk way &amp; Improving the existing road and Lanes, 12 Bed Hotel, with 2 suites, Entrance way &amp; Reception, Water &amp; Waste Management, Solar lights.</li> </ul> <p>(ii) <b>GoluDevta Temple:</b></p> <ul style="list-style-type: none"> <li>Repair of Approach to GoluDevta Temple</li> <li>Improvement of Worship Space at GoluDevta Temple</li> </ul> <p>(iii) <b>Guru Goraknath Temple:</b></p>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>Shed and Railing at Gorakhnath Temple</li> <li>Restoration of Wall at Gorakhnath Temple</li> <li>Gazebos <i>en route</i> Gorakhnath</li> <li></li> </ul> <p>(iv) <b>Other scope:</b> cluding training and capacity development only</p> <p>(v) <b>Banasur Fort:</b></p> <ul style="list-style-type: none"> <li>Removal of existing and undesired structures and relocation</li> <li>Remodelling and reconstruction of existing structures: 03 Gazebos <i>en route</i>, shed on hilltop for café</li> </ul> <p>Preparation of platform etc. on site for Adventure Sport</p> <p><b>Construction of new Tehsil building</b></p>							

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>G+2 Tehsil building in 1400 m<sup>2</sup> out of total land of 5400 m<sup>2</sup>. (Land to be transfer to Tourism dept. from KNVN)</li> <li>1 number Type II quarter and 1 number Type IV quarter</li> <li>Garage facility and car parking</li> <li>Litigation room</li> <li>Boundary wall for whole area</li> <li>Approach road to site</li> </ul> <p>* The works in Banasur package have only been started and works in Rajbhunga will commence after construction of Tehsil building</p>							
<b>Restoration and Adaptive Reuse of Pithoragarh Fort Phase II UK/IDIPT/III/BHT/07</b>	<b>M/S COX Infratech Private Limited in JV with Conaech Associates</b>	Demolition of Buildings Landscaping Works Lighting Plan Planting Plan Restoration of Fort Wall Restoration of Tehsil Office Restoration of Tehsil Residence Restoration of SDM Camp Office Restoration of Record Rooms	01-07-2015	30-06-2016	<u><b>Multilevel Parking near DevSingh Ground</b></u> 1-Dismantling of old parking structure has been completed. 2-Dismantling of CC Road has been completed. <u><b>Construction of</b></u>	7.36%	Minor Change as per site requirement	Appropriate measures have been taken for fulfillment of the objectives.	Weather disturbances due to heavy rains or snowfall may delay the project

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<ul style="list-style-type: none"> <li>Signage and Waste bins</li> </ul>			<u>Tehsil Complex</u> Dismantling of old building has been completed				
<b>UK/IDIPT-III/KOT/01</b>  <b>Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar</b>	M/s SS InfratechJv ,Tikola Nagar, Roorkee	<ul style="list-style-type: none"> <li>Development of Pedestrian Route ( 6 .5 km 5.5.km at Haridwar and 1 km at Roorkee)</li> <li>Landscaping, sitting arrangements, murals etc. on the pedestrian route</li> <li>Providing lighting or illumination on pedestrian route of 6.5 km</li> <li>Providing safety hand railing on the canal side of pedestrian route</li> <li>Providing Solid waste bins along pedestrian route</li> <li>Toilet block and drinking water facilities at route near Shankaracharyachowk</li> <li>Multi facility complex near the proposed pedestrian pathway (before LoheKaPul on railway track near Jawalapur) including toilet complex, drinking water fountain, bathing and sanitation facilities, rest shelter, food distribution centre, police control room, solid waste bins, compound wall with entrance gate, landscaping, etc.</li> <li>Construction of Foot Over Bridge over</li> </ul>	22/07/2015	21/07/2017	<ul style="list-style-type: none"> <li>Brick work at Solani Park side in progress</li> <li>Plaster work and PCC over Brick on Guard wall towards canal side is in progress</li> <li>Landscaping work is in progress along the pathway</li> <li>Plantation work is in progress as part of landscaping</li> <li>Seating arrangement along the pathway is in progress</li> </ul>	24%%	<ul style="list-style-type: none"> <li>Foot Over bridge overNH-58 at Manglaur Cross dropped due to work done by NHAI on the same location</li> </ul>	Appropriate measures have been taken for fulfillment of the objectives	In case of any restrictions by the UP Irrigation Department

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		Railway Track at Jwalapur • Foot Over bridge overNH-58 at Manglour Cross • Installation of tourist Signages (Direction Markers) on KanwarPatri from Har Ki Pauri to Mangalour Cross. (Total length of the stretch of KanwarPatri for the signage direction Markers works is 42 km)			• For Toilet block foundation work completed, preparation work for slab is in progress  • Brick work is in progress at Toilet block complex				
<b>UK/DIPT-III/KOT/02</b>  Development of Tourism Infrastructure in SemMukhem ( Tehri)	M/s Mangalam and Constructio n Company in JV with Sunil Garg Company Meerut	i. Dharamshala/ rest shelter at fair ground. ii. Toilet complex at fair ground including septic tank with soak pit. iii. Water supply Arrangement at Fair Ground iv. Landscaping works at fair ground. v. Development of pathway from main road to fair ground. vi. Solar lighting system along with normal outdoor lights at fair ground. vii. Development of existing small lake near fair ground. (lake covers about 1500 sqm. area, while water spread area is 500 sqm) viii. Solid waste bins and compost pits at Fair Ground. ix. Murals depicting the story of Lord	23/09/2015	21/09/2017	• For rest shelter ( including toilet complex) all brick work for superstructure completed. RCC slab casting work in progress.  • Pathway for Mukhem Village is in progress  • Work for Pujari Cottage is in progress	38%	No change	Appropriate measures have been taken for fulfillment of the objectives	Weather disturbances like heavy rainfall or snowfall may delay the works. Project activities may also get delayed in case of any disagreement with Mela Committee and village Panchayat

Name & No. of Package	Name of the contractor	Listing of works under the package	Starting Date(land clearance) and schedule date of completion		Type of works Continued at Present	Progress %	Expected change from Approved scope	Fulfillment of objective Type of remedial measures needed	Key assumption and risk affect attainment the objective
			Starting date	Date of Completion					
		<p>Krishna at 4 locations.</p> <p>x. Providing solid waste bins and construction of compost pit in Mandir Complex. (Solid wastes from Mandir complex will be collected in collection bins and ultimately dumped in to compost pit to be developed in the sub project.)</p> <p>xi. Solar light at the temple complex.</p> <p>xii. <b>Canopy for a length of 147 m on pathway in between fair ground and Nagraj Temple.</b></p> <p>xiii. Hand rails and finishing works on pathway between fair ground and temple complex.</p> <p>xiv. Facilities planned at Mukhem village are:</p> <p>a) Renovation of existing Temple in Mukhem village.</p> <p>b) Renovation of existing entry gate of Mukhem village.</p> <p>c) Development of internal roads in Mukhem village.</p> <p>d) Expansion of existing pipe water supply network.</p> <p>e) Installation of solar lighting system,</p> <p>f) Solid waste management with compost pits in Mukhem village.</p> <ul style="list-style-type: none"> <li>Tourism Signages on the 23Km road from Kodar to Fair Ground.</li> </ul>			<ul style="list-style-type: none"> <li>Renovation of Mukhem village temple is in progress.</li> <li>Silt removal from Jheel completed. Pitching work is in progress.</li> </ul>				<p>Canopy works proposed in this project falls in reserve forest and will only be undertaken if Dept. gets Clearance for its other state funded project in which trek repair works are undertaken.</p>

Any other information useful for assessing environmental performance of the project:

9. No additional information during this period

## 2. Compliance Status

10. Status of Compliance with EARF/ADB Procedures is shown in Table 3.

**Table 3: Status of Compliance with EARF/ADB Procedures**

S.No	Name & No. of Package	Environment Category	Status of preparation of IEE	Status of Approval by ADB	Date of Approval	Further Action needed For Compliance & Responsibility
1	UK/IDIPT-III/ DDN/01	B	Completed and approved	Approved	03.08.2015	Regular monitoring and reporting of EMP
2	UK/IDIPT-III/ DDN/02	B	Completed and approved	Approved	01.09.2015	Regular monitoring and reporting of EMP
3	UK/IDIPT-III/DDN/03	B	Completed and approved	Approved	25.05.2016	Regular monitoring and reporting of EMP
4*	UK/IDIPT/III/BHT/01Lot1 UK/IDIPT/III/BHT/01Lot2	B	Completed and approved	Approved	08.09.2015	Regular monitoring and reporting of EMP
5	UK/IDIPT/III/BHT/02	B	Design stage			
6*	UK/IDIPT/III/BHT/03 UK/IDIPT/III/BHT/06	B	Completed and approved	Approved	09.07.2015	Regular monitoring and reporting of EMP
7*	UK/IDIPT/III/BHT/04 UK/IDIPT/III/BHT/05	B	Completed and approved	Approved	06.08.2015	Regular monitoring and reporting of EMP
8	UK/IDIPT/III/BHT/07	B	Completed and approved	Approved	25.04.2016	Regular monitoring and reporting of EMP
9	UK/IDIPT-III/KOT/ 01	B	Completed and approved	Approved	11.05.2015	Regular monitoring and reporting of EMP
10	UK/IDIPT-III/KOT/ 02	B	Completed and approved	Approved	25.05.2015	Regular monitoring and reporting of EMP
11	UK/IDIPT-III/KOT/ 03	B	In process			
12	UK/IDIPT/III/GEN/01	Goods Package				
13	UK/IDIPT/III/GEN/02	B	Completed and approved	Approved	30.07.2015	Regular monitoring and reporting of EMP
14	UK/IDIPT/III/GEN/03	In process				

\*S.no 4, 6 and 7, Project bifurcated into 02 packages



### 3. Compliance status with National/ State/ Local statutory environmental requirements

11. Status of Compliance with National/ State/ Local statutory environmental requirements is shown in Table 4.

**Table 4: Status of Environment, Forest and other Clearance**

Work (Package No.)	Applicable Legislation/Type of clearance	Clearance Given by and date	Subject/Issue	Remarks/Action needed
<b>UK/IDIPT-III/ DDN/01</b> Development of Tourism Infrastructure in Kartikeya Swami Circuit (Lot-1) (Tungeshwar & Durgadhar Temple)	No environmental and forest clearance required. No requirement of NOC from ASI	Not applicable		
<b>UK/IDIPT-III/ DDN/02</b> Development of Tourism Infrastructure in Kartikeya Swami Circuit (Kartikeya Swami Temple)	Forest clearance required. No requirement of Environmental Clearance or NOC from ASI	In principle approval obtained from MoEF& CC, Regional Office dt. 12/05/16	Kartikeya Swami Temple and pathway are located in Reserve Forest area, for which forest clearance is needed. <b>Clearance received from MoEF&amp; CC</b>	Works to be done as per Clearance conditions.
<b>UK/IDIPT-III/DDN/03</b> Conservation and Development of Rural Tourism in district Rudraprayag, Chamoli and Uttarkashi	No Environmental and forest clearance required. NOC required from Forest Dept. for Tungnath location. No requirement of NOC from ASI.	NOC obtained from Forest Department, GoUkdt. 08/09/14	Out of 9 rural sites, Tungnath lies in buffer zone of Kedamath Wildlife Sanctuary <b>NOC received from Forest Department</b>	Works to be done as per conditions of NOC given by the Forest department.
<b>UK/IDIPT-III/KOT/01</b> Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar	No environmental and forest clearance required. No requirement of NOC from ASI.	Not applicable		
<b>UK/IDIPT-III/KOT/02</b> Development of Tourism Infrastructure in Sem Mukhem	No Environmental and forest clearance required. (Only a minor canopy component was proposed in reserve forest since trek over which canopy has to be installed, falls in reserve forest). The same was subject		The project is for creation of Tourism Infrastructure in Sem Mukhem. No forest land acquisition involved, so no forest clearance required. The project site is not in ASI regulated Zone.	The canopy component will be dropped if Dept. does not get clearance for its project in the same area where trek repair works are proposed.

Work (Package No.)	Applicable Legislation/Type of clearance	Clearance Given by and date	Subject/Issue	Remarks/Action needed
	to Forest Clearance for repair of trek proposed under Dept. other project in Mukhem No requirement of NOC from ASI.			
<b>UK/IDIPT-III/BHT/01</b> Conservation of Cultural Heritage and Urban Place making in Nainital Lot 1	NOC from PWD, forest clearance required for pre fab toilets and view points on nature trail (Tiffin top and Tanki China). No requirement of NOC from ASI.	NOC obtained from PWD  Forest Clearance is in progress	The project is for conservation of cultural heritage involving mostly repair, restoration works. There are 02 nature trails falling in reserve forest where portable toilet and viewpoints are proposed. So forest clearance required. The project site is not in ASI regulated Zone.	Forest Clearance is in process and trek works will be taken up after forest clearance is obtained.
<b>UK/IDIPT-III/BHT/03</b> Conservation and adaptive re-use of Almora Fort (Rani Mahal)	No Environmental and forest clearance required. No requirement of NOC from ASI.	Not applicable		
<b>UK/IDIPT-III/BHT/05</b> Conservation and adaptive re-use of Champawat Fort (Banasur)	No Environmental and forest clearance required.  Requirement of NOC from State ASI for Banasur Fort.	NOC obtained vide letter dt. 5 <sup>th</sup> Dec, 2014.  <b>Annexure 3 (iii)</b>	Banasur Fort is a State Protected Monument and the custodian is State Culture Dept. <b>NOC received from State ASI</b>	Works as per NOC. Works should not interfere with the original character of the Fort structure.
<b>UK/IDIPT-III/BHT/07</b> Restoration, Adaptive Reuse and Revitalization of Pithoragarh Fort	No Environmental and forest clearance required.  NOCs from line agencies obtained	NOC from District Administration for shifting Tehsil office NOC from Executive Engineer Nagarpalika Parishad Pithoragarh  NOC from District Sport officer	The project is for conservation of cultural heritage involving mostly repair, restoration works. Tehsil was housed in the Fort campus, which is to be relocated to carry on repair and restoration works in the Fort	Works to be done as per conditions of NOC given by line agencies and in line with their suggestions

#### 4. Compliance status with the environmental covenants as stipulated in the Loan Agreement

12. The status of compliance with environmental loan covenants is presented in Table 5.

**Table 5: Status of Compliance with Environmental Loan Covenants**

S. No	Covenants	Compliance
1.	The Borrower and the States shall ensure that the preparation, design, construction, implementation, operation and decommissioning of each Subproject and all Project facilities comply with (a) all applicable laws and regulations of the Borrower and the States relating to environment, health, and safety; (b) the Environment Safeguards; (c) the EAFR; and (d) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguard Monitoring Report.	Compliance of (a) all applicable laws and regulations of the Borrower and the States relating to environment, health, and safety (b) Environment Safeguards; (c) the EAFR; and (d) EMP is being ensured during sub projects implementation.
	<b>Safeguards – Related Provisions in Bidding Documents and Works Contracts</b>	
	<p>The States shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) Comply with the measures and requirement relevant to the contractor set forth in the IEE, the EMPs, any RO and any IPP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguard Monitoring Report;</p> <p>(b) make available a budget for all such environment and social measures;</p> <p>© provide the relevant State with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, the or the IPP (if any): and</p> <p>(d) Fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p>	<p>Full EMP made part of the contract agreements of respective subprojects, thus its provisions being complied with. Orientation sessions are being carried out in each site for better understanding of Safeguards Compliance by the Contractor</p> <p>Environmental monitoring and mitigation costs allocated/ incorporated in contract agreements. No such environmental impact has been identified so far that was not considered in the IEE and in the EMP. (If any such impact arises in future, will be suitably addressed)</p> <p>All the areas that if disturbed by construction activities will be restored to pre-project condition by the contractors.</p>
	<b>Safeguards Monitoring and Reporting</b>	
11.	The States shall do the following:	
(a)	Submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to	The third semiannual report for Loan No. 3223 IND is submitted

S. No	Covenants	Compliance
	<p>affected persons promptly upon submission;</p> <p>(b) if any unanticipated environment and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, any RP or any IPP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and Report any breach of compliance with the measures and requirements set forth in the EMP, any IPP promptly after becoming aware of the breach.</p>	<p>herewith. Subsequent reports will be submitted on time.</p> <p>In case of any unanticipated environmental risks and impacts arise, that shall be immediately informed to ADB with detailed description of the event and proposed corrective action plan.</p> <p>Breach will be reported to ADB immediately after becoming aware of it.</p>

5. **Compliance Status with Environment Management and Monitoring Plans as stipulated in the environmental documentation as agreed with ADB.**

13. The compliance Status with Environment Management and Monitoring Plan is shown in Table 6.

Table 6: EMP Implementation Status

S. No	Sub Project Name	EMP Part of Contract Documents (Yes/No)	EMP being Implemented (Yes/ No)	Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction)	Actions Proposed/ Additional Corrective Measures Required
1	UK/IDIPT-III/ DDN/01	Yes	Yes	Satisfactory	<p>DSC has carried out baseline monitoring. Subsequent environmental monitoring has been done by the Contractor as per EMP. Contractor has been instructed to improve housekeeping and sanitation facilities at Site.</p> <p>The contractor has been instructed to suitably equip the first aid kits.</p> <p>The Contractor has been instructed to deploy safety officer to look after safety measures</p> <p>The contractor has been instructed to put adequate number of dustbins at the work site</p>
2	UK/IDIPT-III/ DDN/02	Yes	Yes	Partially Satisfactory	<p>The contractor has been instructed to maintain all registers and records and project disclosure signages</p>

S. No	Sub Project Name	EMP Part of Contract Documents (Yes/No)	EMP being Implemented (Yes/ No)	Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction)	Actions Proposed/ Additional Corrective Measures Required
					<p>The contractor has been instructed to procure first aid kits.</p> <p>The Contractor has been instructed to deploy safety officer to look after safety measures and ensure usage of PPEs for labour</p> <p>The contractor has been instructed to put adequate number of dustbins at the work site</p>
3	UK/IDIPT-III/ DDN/03	Yes	Yes	Partially Satisfactory	<p>The contractor has been instructed to maintain all registers and records and project disclosure signages at all rural tourism sites.</p> <p>The Contractor has been instructed to deploy safety officer to look after safety measures and ensure usage of PPEs for labour</p> <p>The Contractor has been instructed to carry out subsequent environment monitoring</p> <p>The Contractor has been instructed to improve housekeeping at Mukhwa site.</p> <p>The Contractor has been instructed for proper stockpiling of raw materials at Kaviatha site</p>
4	UK/IDIPT/III/BHT/01	Yes	Yes	Partially Satisfactory	<p>Contractor has been instructed for proper stockpiling of raw materials and waste in designated area with demarcation.</p> <p>The contractor has also been instructed to suitably equip two first aid kits at each work site and deploy safety officer to look after safety measures</p> <p>Though first line of safety is fine, Contractor shall look into second line of safety scaffold safety, working at height, hand tool safety and vehicle, construction heavy equipment safety.</p>
5	UK/IDIPT/III/BHT/03	Yes	Yes	Partially Satisfactory	<p>Contractor has been instructed to improve housekeeping, and proper stockpiling with demarcation of raw materials and waste.</p> <p>The contractor has also been instructed to equip first aid boxes suitably,</p>

S. No	Sub Project Name	EMP Part of Contract Documents (Yes/No)	EMP being Implemented (Yes/ No)	Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction)	Actions Proposed/ Additional Corrective Measures Required
					<p>conduct first aid training and deploy safety officer to look after safety measures</p> <p>The contractor shall ensure first line of safety that is provision of Personal Protective Equipment for all workers.</p>
6	UK/IDIPT/III/BHT/05	Yes	Yes	Partially Satisfactory	Contractor was directed to improve housekeeping and clearly demarcate the raw material and waste storage areas. Also instructed to increase the frequency of waste disposal from sites and solid waste management
7	UK/IDIPT/III/BHT/07	Yes	Yes	Satisfactory	<p>On an average 27 (27 male) local labourers have been deployed for the construction activities.</p> <p>Contractors have provided basic safety equipment like safety Hat, safety Boots &amp; first-aid box at site.</p> <p>On job training regarding safety measures were imparted to the laborers and contractors supervisors and time to time.</p> <p>Dust bins provided for collection of solid waste materials.</p> <p>Increased the frequency of waste disposal from sites. Suggested for proper solid waste management</p> <p>Ensuring regular medical checkup of labors after giving instructions to the contractors by DSC/PIU</p> <p>The laborers are staying in a common hall which has been hired by the contractor in Pithoragarh (Hotel Zyonar) on monthly bases.</p>
8	UK/IDIPT-III/KOT/01	Yes	Yes	Partially Satisfactory	<p>The contractor has been advised to maintain sanitation facilities at construction camp</p> <p>The contractor has been instructed to maintain bathing place for female</p>

S. No	Sub Project Name	EMP Part of Contract Documents (Yes/No)	EMP being Implemented (Yes/ No)	Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction)	Actions Proposed/ Additional Corrective Measures Required
					<p>workers.</p> <p>The contractor has been sensitized to use personal protective equipment.</p> <p>The contractor has been instructed to carry out environmental monitoring regularly as per monitoring plan</p> <p>The contractor has been instructed to segregate construction waste from all locations at one place and enclose it with caution tape to avoid any injury to construction workforce.</p>
9	UK/IDIPT-III/KOT/02	Yes	Yes	Satisfactory	<p>The contractor has been instructed to carry out environmental monitoring for winter season and to maintain sanitation facilities at construction camp at Mela Ground</p> <p>The contractor has been instructed to store excavated earth from the reservoir properly and use in the filling works of retaining wall of this reservoir.</p> <p>At temple site at Mukhem village as well as Pathway in the Mukhem village, the contractor has been instructed to store construction material properly so that movement of villagers is not restricted.</p> <p>The contractor has been instructed to segregate all construction waste at one location at the Mela ground construction site</p>

## 6. Status of Implementation of Environment Management Plan

14. EMP Monitoring status of subprojects is presented in Table 7.

Table 7 (i): EMP Monitoring Status Chart- Development of Tourism Infrastructure In Kartikeya Swami Circuit (Lot-1) (Tungeshwar&Durgadhar Temple)

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT-III/ DDN/01					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection specially from earthquake and other natural disasters	PMU & DSC	IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations.  Measures for earthquake resistance incorporated in DPR No site of archaeological remains in the vicinity		None
Pre-construction activities by the Contractor	1.Construction Camps 2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas 3. Circulation plan during construction  4. Site clearance activities 5. Drinking water availability  6. Identification of disposal sites  7. Waste management on site	Contractor & DSC	1 Construction camp established in open land near the project site. It is away from habitation. Sanitation facilities at construction camp have improved. Drinking water facilities available at site. Existing water supply arrangement from natural source is used. 2. No protected area within 200 m of project site 3. No impact on traffic movement due to construction as there is no frequent to and fro transportation of materials The project site is on extreme left edge of NH-58 and construction activities are not interfering with traffic movement and tourist movement. 4. The site clearance activities have been carried out and excavated earth has been kept aside and is being used 5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source. 6. The waste material generated due to clearance and demolition activities is being used for filling and leveling at site only. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off. 7. The waste generated during the construction is segregated and stored at the site for possible reuse later. Contractor was instructed to increase the number of dustbins. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU	Solid Waste management is to be improved.	Increase the number of dustbins



IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
Construction	1. Improper stockpiling  2. Quarry/ Borrow pit operations  3. Stripping, stocking & preservation of top soil  4. Soil erosion  5. Water pollution due to fuel/lubricants  6. Siltation of water bodies  7. Generation of dust  8. Emission from construction vehicles  9. Noise from construction equipment 10. Material handling at site 11. Disposal of construction waste/debris 12. Sanitation facilities at project site 13. Safety measures 14. Risks force majeure  15. Malaria risk		1. The main construction materials at present being used are bricks, cement, stone, sand and steel rods. These are being stocked properly. Stockpiles separate and covered  2. The contractor is obtaining sand and sub grade from the licensed quarries. No borrow pit operations have been carried out so far. 3. The excavated earth for foundation work of Dharamshala in Tungeshwar has been kept aside and will be reused for filling. 4. The soil erosion issue is not there as there is no cutting or steep slope issues involved in the project. 5. The fuel and lubricants are not stored at site as project is small in nature. These are purchased from market as per need. 6. No water body in the impact area of the subproject. 7. Generation of dust is on account of material handling at site. Necessary dust suppression measures such as water sprinkling are followed. 8. The construction vehicles usage is not much in the project. It is only for the transportation of construction materials and there is a small concrete mixer at site. The trucks carrying construction material have pollution under control certificates. 9. In the current project the only noisy equipment used is concrete mixer and it is operated intermittently. No excess noise generation is on account of construction activities. 10. The material handling at site is satisfactory a smost of the workers were seen using personal protective equipment. 11. Construction waste generated so far has been stored for utilization and disposal further at designated location. 12. Toilet block completed and functional 13. Use of PPE's is satisfactory. Caution tape is provided and caution sign board is also put up at site. 14. Risk Force Majeure: situation not occurred so far. Necessary action will be taken as per contract provisions if such situation arises 15. Instructions have been given to contractor regarding malaria	Housekeeping should be improved.	

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	16.Chance archaeological finds  17.Religious structures 18. Construction Staff causing disruption to migratory birds		risk and prevention measures. 16. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. 17. The project is not impacting any religious structures rather its meant for maintenance and restoration of religious structures. 18. There is neither any route of migratory birds nor any location where migratory birds are visiting.		
Operation	1-Environmental conditions 2.Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

**Table 7 (ii): EMP Monitoring Status Chart- Development of Tourism Infrastructure In Kartikeya Swami Circuit (Lot-2) (Kartiekeya Swami Temple)**

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT-III/ DDN/02					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection	PMU & DSC	IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations.		None

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>especially from earthquake and other natural disasters</p>		<p>Measures for earthquake resistance incorporated in DPR No site of archaeological remains in the vicinity</p>		
Pre-construction activities by the Contractor	<p>1. Construction Camps</p> <p>2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas</p> <p>3. Circulation plan during construction</p> <p>4. Site clearance activities</p> <p>5. Drinking water availability</p> <p>6. Identification of disposal sites</p> <p>7. Waste management on site</p>	Contractor & DSC	<p>1 Construction workers reside in existing structures. No labour camp established.</p> <p>2, Work area properly demarcated.</p> <p>3. Site is far from main road. Traffic interference is not there on account of the construction activities.</p> <p>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</p> <p>5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source.</p> <p>6. Disposal site will be identified in consultation with Forest Dept. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p>		<p>training program on environmental safeguards has been conducted by the DSC Environmental expert after mobilisation of the contractor</p>
Construction	<p>1. Improper stockpiling</p> <p>2. Quarry/ Borrow pit operations</p> <p>3. Stripping, stocking &amp; preservation of top soil</p>		<p>1. The main construction materials at present being used are bricks, cement, stone, sand and steel rods. These are being stocked properly.</p> <p>2. The contractor is obtaining sand and sub grade from the licensed quarries. No borrow pit operations have been carried out so far.</p> <p>3. The excavated earth from pathway work, retaining wall and rest sheds has been kept aside and is being simultaneously reused for filling and leveling.</p>	<p>Registers and Records to be maintained Safety Officer to be deployed</p>	

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	4. Soil erosion 5. Water pollution due to fuel/lubricants 6. Siltation of water bodies 7. Generation of dust 8. Emission from construction vehicles 9. Noise from construction equipment 10. Material handling at site 11. Disposal of construction waste/debris 12. Sanitation facilities at project site 13. Safety measures 14. Risks force majeure 15. Malaria risk 16. Chance archaeological finds 17. Religious structures 18. Construction Staff causing disruption to migratory birds		4. The soil erosion issue is not there as there is no cutting and moreover the area is rocky. 5. The fuel and lubricants are not stored at site as project is small in nature. These are purchased from market as per need. 6. Natural water source but not within the impact zone. 7. Generation of dust is very less. 8. The construction vehicles usage is not much in the project. It is only for the transportation of construction materials and there is a small concrete mixer at site. The trucks carrying construction material have pollution under control certificates. 9. So far no equipment has been used and all activities are manual. 10. The material handling at site is fine as most of the workers were seen using personal protective equipment. 11. Construction waste generated so far has been stored for utilization and disposal further at designated location. 12. The sanitation facilities at construction camp are proper. 13. First aid kits were not found suitably equipped Use of PPE's is satisfactory. Caution tape is provided and caution sign board is also put up at site. 14. Risk Force Majeure: situation not occurred so far. Necessary action will be taken as per contract provisions if such situation arises 15. Instructions have been given to contractor regarding malaria risk and prevention measures. 16. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. 17. The project is not impacting any religious structures rather its meant for maintenance and restoration of religious structures. 18. There is neither any route of migratory birds nor any location where migratory birds are visiting.		
Operation	1-Environmental conditions 2.Uncontrolled tourism 3. Management of the toilet	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities				

Table 7 (i): EMP Monitoring Status Chart- Rural Tourism in District Tehri and Uttarkashi

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT-III/ DDN/03					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection specially from earthquake and other natural disasters	PMU & DSC	IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations.  Measures for earthquake resistance incorporated in DPR No site of archaeological remains in the vicinity		None
Pre-construction activities by the Contractor	1. Construction Camps 2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas 3. Circulation plan during construction	Contractor & DSC	Kanakchori 1 No Construction camp. Only local labor involved. 2. Temporary Toilet has been constructed for labour. 3. Drinking water facilities available at site from piped supply line. / Existing water supply arrangement. 2. Located within village boundaries. No impact on traffic movement due to construction as magnitude of work is very less. There is no frequent to and fro transportation of materials Construction activities frequency is less and hence are not interfering with traffic movement and tourist movement.		Training program on environmental safeguards has been conducted by the DSC Environmental expert after mobilisation of the contractor. Contractor orientation is to be regularly done by the DSC Safeguards Expert.

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>4. Site clearance activities</p> <p>5. Drinking water availability</p> <p>6. Identification of disposal sites</p> <p>7. Waste management on site</p>		<p>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</p> <p>5. Potable drinking water is available for the construction force through the existing arrangement from water supply line.</p> <p>6. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p> <p>Kabiltha</p> <p>1. Construction camp established on site KalidasSmarak. Almost 50% of labour is local.</p> <p>2. Existing toilet facilities at site is being used for construction camp. Drinking water facilities available at site from natural source. Existing water supply arrangement from natural source is used.</p> <p>2. Within village boundary. No impact on traffic movement due to construction as there is no frequent to and fro transportation of materials. General vehicle frequency in the area is very less. Construction activities frequency is less and hence are not interfering with traffic movement and tourist movement.</p> <p>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</p> <p>5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor</p>	<p>The contractor has been instructed to maintain all registers and records and project disclosure signages at all working sites.</p> <p>The Contractor has been instructed to deploy safety officer to look after safety measures and ensure usage of PPEs for labour</p> <p>The Contractor has been instructed to carry out subsequent environment monitoring</p> <p>The Contractor has been instructed to improve housekeeping at Mukhwa site.</p> <p>The Contractor has been instructed for proper stockpiling of raw materials at Kabiltha site</p>	

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
			<p>and reviewed by the DSC and will be approved in consultation with PIU</p> <p>Phalasi</p> <ol style="list-style-type: none"> <li>1. No Construction camp established. Skilled labor resides in existing structures and other labour is local.</li> <li>2. Existing toilet facilities at site is being used for construction labour. Drinking water facilities available at site from natural source and also water supply line</li> <li>2. Within village boundary. Hence no impact on traffic movement due to construction as there is no frequent to and fro transportation of materials. Vehicle frequency in the area is very less. Construction activities frequency is less and hence are not interfering with traffic movement and tourist movement.</li> <li>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</li> <li>5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source and water supply line.</li> <li>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</li> <li>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</li> </ol> <p>Harshil</p> <ol style="list-style-type: none"> <li>1. Local labour hired. No Construction camp established.</li> <li>2. Existing toilet facilities at site is being used for construction labour. Drinking water facilities available at site from natural source and also water supply line</li> <li>2. Within village boundary.</li> </ol>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
			<p>3. No impact on traffic movement due to construction as there is no frequent to and fro transportation of materials. Construction vehicle frequency is less and hence are not interfering with traffic movement and tourist movement.</p> <p>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</p> <p>5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source and water supply line.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p> <p>Mukhwa</p> <p>1. No Construction camp established. Local labour employed</p> <p>2. Existing toilet facilities at site is being used for construction labour. Drinking water facilities available at site from natural source and also water supply line</p> <p>2. Within village boundary. Hence no impact on traffic movement due to construction as there is no frequent to and fro transportation of materials. Vehicle frequency in the area is very less. Distance from main road at Harshil is 01 km. Construction activities frequency is less and hence are not interfering with traffic movement and tourist movement.</p> <p>4. The site clearance activities have been done and excavated earth has been kept aside and is being used for levelling and filling.</p> <p>5. Potable drinking water is being made available for the construction force through the existing arrangement from natural source and water</p>		



IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
			<p>supply line.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p>		
Construction	<p>1. Improper stockpiling</p> <p>2. Quarry/ Borrow pit operations</p> <p>3. Stripping, stocking &amp; preservation of top soil</p> <p>4. Soil erosion</p> <p>5. Water pollution due to fuel/lubricants</p> <p>6. Siltation of water bodies</p> <p>7. Generation of dust</p> <p>8. Emission from construction vehicles</p> <p>9. Noise from construction equipment</p>		<p>1. The main construction materials being used at present, at all 04 sites are bricks, cement, stone, sand and steel rods. These are being stocked properly. At Kanakchori site contractor was instructed to properly demarcate and cover stockpiles.</p> <p>2. The contractor is obtaining sand and sub grade from the licensed quarries. No borrow pit operations have been carried out so far.</p> <p>3. The excavated earth is being kept aside and is being simultaneously reused for filling and leveling.</p> <p>4. Minor works. The soil erosion issue is not there as there is no cutting and moreover the area is rocky.</p> <p>5. The fuel and lubricants are not stored at site as projects are small in nature. These are purchased from market as per need.</p> <p>6. Natural water source but not within the impact zone.</p> <p>7. Generation of dust is very less.</p> <p>8. The construction vehicles usage is not much in the project. It is only for the transportation of construction materials and there is a small concrete mixer at site. The trucks carrying construction material have pollution under control certificates.</p> <p>9. So far no equipment has been used and all activities are manual.</p> <p>10. The material handling at site is fine as most of the workers were seen using personal protective equipment.</p> <p>11. Construction waste generated so far has been stored for utilization and disposal further at designated location.</p>	Proper stockpiling to be done at Kanakchori	

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	10. Material handling at site 11. Disposal of construction waste/debris 12. Sanitation facilities at project site 13. Safety measures 14. Risks force majeure 15. Malaria risk 16. Chance archaeological finds 17. Religious structures 18. Construction Staff causing disruption to migratory birds		12. The existing sanitation facilities are utilized. 13. Use of PPE's is satisfactory. Caution tape is provided and caution sign board is also put up at site. 14. Risk Force Majeure: situation not occurred so far. Necessary action will be taken as per contract provisions if such situation arises 15. Instructions have been given to contractor regarding malaria risk and prevention measures. 16. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. 17. The project is not impacting any religious structures rather its meant for maintenance and restoration of religious structures. 18. There is neither any route of migratory birds nor any location where migratory birds are visiting.		
Operation	1-Environmental conditions 2.Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

Table 7 (iv): EMP Monitoring Status Chart- Conservation of Cultural Heritage and urban place making in Nainital Lot-1

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT/III/BHT/01					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection specially from earthquake and other natural disasters	PMU & DSC	1. Environmental impacts were ascertained and accordingly IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations		
Pre-construction activities by the Contractor	<p>1.Construction Camps</p> <p>2.Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas</p> <p>3. Circulation plan during construction</p> <p>4. Site clearance activities</p> <p>5.Drinking water availability</p> <p>6. Identification of disposal sites</p>	Contractor & DSC	<p>1 Construction camp established in open land near the Methodist church project site. It is near habitation. Sanitation facilities at construction camp have improved. Drinking water facilities available at site. The source of water is tap water.</p> <p>2. No protected area within 200 m of project site</p> <p>3.No impact on traffic movement during construction.</p> <p>4. The site clearance activities have been carried out and excavated earth has been kept aside.</p> <p>5. Potable drinking water is being made available for the construction force through the existing tap water supply.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. The site for disposal has been selected in consultation with Municipality and DFO. It is a designated dumping site.</p>	First aid training to be given. Stockpiles of waste to be properly covered till probable reuse in later stages.	1- Trained first aider to be available at all work fronts in Nainital.

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	7. Waste management on site		7. So far the waste generated during the construction is segregated and stored at the site for possible reuse later but not covered adequately. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU		
Construction	<p>1. Improper stockpiling</p> <p>2. Quarry/ Borrow pit operations</p> <p>3. Stripping, stocking &amp; preservation of top soil</p> <p>4. Soil erosion</p> <p>5. Water pollution due to fuel/lubricants</p> <p>6. Siltation of water bodies</p> <p>7. Generation of dust</p>		<p>1. The main construction materials at present being used are bricks, cement, sand and steel rods. Proper stockpiling was not seen. So instructions were given to the Contractor.</p> <p>2. Material is purchased from licensed quarries. No quarrying/ borrow pit operations done so far.</p> <p>3. The top soil generated is being utilized</p> <p>4. The soil erosion issue is not there as there is no cutting or steep slope issues involved in the project.</p> <p>5. The fuel and lubricants are not stored at site as project is small in nature. These are purchased from market as per need.</p> <p>6. Silt prevention measures undertaken (silt traps) in Treatment of Dam wall, restoration of Band Stand and Municipal Library</p> <p>7. Generation of dust is on account of material handling at site. Necessary dust suppression measures such as water spray is followed.</p> <p>8. The construction vehicles usage is not</p>	<p><b>Church Site</b></p> <ul style="list-style-type: none"> <li>• Usage of PPEs was not proper.</li> <li>• Scaffold safety tag was missing. There was no Scaffold Expert. Hand tools were found without ELCB and without neutral.</li> </ul> <p><b>Library</b></p> <ul style="list-style-type: none"> <li>• Usage of PPEs was proper.</li> <li>• Back side door opening towards lake shall be closed</li> <li>• Electrical safety to be looked into</li> <li>• Increase the number of dustbins at site.</li> </ul>	<p>1- The contractor shall maintain adequate availability of PPEs.</p> <p>2- Contractor shall barricade the waste storage site.</p> <p>3- Construction material and waste shall be stored in demarked area with barricades</p> <p>4- Regular monitoring of the tools by Safety Expert should be done..</p> <p>5- Safety Expert to check all safety issues.</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>8.Emission from construction vehicles</p> <p>9. Noise from construction equipment</p> <p>10. Material handling at site</p> <p>11. Disposal of construction waste/debris</p> <p>12. Sanitation facilities at project site</p> <p>13. Safety measures</p> <p>14. Risks force majeure</p> <p>15. Malaria risk</p> <p>16.Chance archaeological finds</p>		<p>much in the project. It is only for the transportation of construction materials and a small concrete mixer at site. The trucks carrying construction material have pollution under control certificates.</p> <p>9. In the current project the only noisy equipment used is concrete mixer and it is operated intermittently.</p> <p>10.The material handling at site is fine as most of the workers were seen using personal protective equipment.</p> <p>11. Construction waste generated so far has been stored for utilization and disposal further at designated location.</p> <p>12. Sanitation facilities at site are satisfactory.</p> <p>13. Use of PPE's is satisfactory. Caution tape is provided and caution sign board is also put up at site.</p> <p>14. Risk Force Majeure: situation not occurred so far. Necessary action will be taken as per contract provisions if such situation arises</p> <p>15. Instructions have been given to contractor regarding malaria risk and prevention measures.</p> <p>16. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found.</p> <p>17. The project is not impacting any religious structures</p> <p>18. There is neither any route of migratory birds nor any location where migratory birds are visiting.</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	17. Religious structures 18. Construction Staff causing disruption to migratory birds				
Operation	1-Environmental conditions 2.Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

Table 7 (v): EMP Monitoring Status Chart- Restoration and adaptive reuse of Almora Fort (Rani Mahal)

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT/III/BHT/03					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection specially from earthquake and other natural disasters	PMU & DSC	1. IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations		
Pre-construction activities by the Contractor	<p>1. Construction Camps</p> <p>2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas</p> <p>3. Circulation plan during construction</p> <p>4. Site clearance activities</p> <p>5. Drinking water availability</p> <p>6. Identification of disposal sites</p>	Contractor & DSC	<p>1 Construction camp established in open land near the project site. It is very far from habitation. Sanitation facilities at construction camp are not proper.</p> <p>2. No protected area within 200 m of project site</p> <p>3. No impact on traffic movement during construction.</p> <p>4. The site clearance activities have been carried out at excavated earth has been kept aside.</p> <p>5. Drinking water facilities available at site. The source of water is piped supply from natural source.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the</p>	<p>Sanitation at labour camp was not proper. First aid kits have been procured. But First aid training has not been imparted to appropriate number of workers.</p> <p>1. No demarcation of storage area for raw materials and waste.</p> <p>2. Signage depicting project details was not found.</p>	<p>1- Contractor was directed to increase the cleanliness and sanitation arrangements at the site. Contractor was directed to have a trained first aider and Give first aid training to appropriate number of workers.</p> <p>3- A training program on environmental safeguards has been conducted by the DSC Environmental expert after mobilisation of the contractor</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	7. Waste management on site		<p>site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p> <p>7. Presently, the waste generated is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p>		
Construction	<p>1. Improper stockpiling</p> <p>2.Quarry/ Borrow pit operations</p> <p>3.Stripping, stocking &amp; preservation of top soil</p> <p>4.Soil erosion</p> <p>5. Water pollution due to fuel/lubricants</p> <p>6. Siltation of water bodies</p>		<p>1. The main construction materials at present being used are bricks, cement, stones, sand and steel rods. These are not stocked properly, for which instructions were given.</p> <p>2. Material is being purchased from licensed quarries. No quarrying/borrow pit operations.</p> <p>3. Top soil generated from foundation work is preserved for reuse.</p> <p>4. The soil erosion issue is not there as there is no cutting or steep slope issues involved in the project.</p> <p>5. The construction vehicles usage is not much in the project. Fuel/ lubricants are not stored in larger quantities and brought as per demand.</p> <p>6. No water body in immediate</p>	<p>Maintain adequate supply of PPEs at site.</p> <p>The contractor shall keep one safety officer at site.</p> <p>Increase sprinkling frequency</p> <p>Cover stockpiled material properly</p>	<p>1- The contractor shall keep availability of adequate number of PPEs.</p> <p>2- Contractor shall use man at work board and red tape barricades.Construction material and waste shall be stored in demarked area with barricades</p> <p>3- Adequate number of dustbins should be kept at site and camp area..</p>



IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>7. Generation of dust</p> <p>8. Emission from construction vehicles</p> <p>9. Noise from construction equipment</p> <p>10. Material handling at site</p> <p>11. Disposal of construction waste/debris</p> <p>12. Sanitation facilities at project site</p> <p>13. Safety measures</p> <p>14. Risks force majeure</p> <p>15. Malaria risk</p> <p>16. Chance archaeological finds</p>		<p>vicinity</p> <p>7. Water sprinkling done. However, instructions were given to increase the frequency.</p> <p>8. Frequency of transportation vehicles is very limited. The trucks carrying construction material have pollution under control certificates.</p> <p>9. In the present phase, the only noisy equipment used is concrete mixer and it is operated intermittently.</p> <p>10. Usage of PPE not proper and directions were given.</p> <p>11. Presently stored at site. Construction waste generated so far has been stored for utilization and suitable disposal further at designated location.</p> <p>12. Sanitation facility at site is not proper, for which directions were given.</p> <p>13. Usage of PPE was not proper. The contractor was instructed to procure first aid kits and to deploy safety officer to look after safety measures</p> <p>14. Risk Force Majeure situation has not occurred so far. Necessary action will be taken as per contract provisions</p> <p>15. Instructions issued regarding malaria risk and prevention were given.</p> <p>16. Chance Archaeological finds</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	17. Religious structures 18. Construction Staff causing disruption to migratory birds		have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. 17. The project is not impacting any religious structures 18. There is neither any route of migratory birds nor any location where migratory birds are visiting.		
Operation	1-Environmental conditions 2.Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

Table 7 (vi): EMP Monitoring Status Chart- Restoration and adaptive reuse of Champawat Fort (Banasur)

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
UK/IDIPT/III/BHT/05					
Location	Lack of sufficient planning to assure long term sustainability of the facilities and ensure protection specially from earthquake and other natural disasters	PMU & DSC	1. IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and after many stakeholder consultations		
Pre-construction activities by the Contractor	<p>1.Construction Camps</p> <p>2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas</p> <p>3. Circulation plan during construction</p> <p>4. Site clearance activities</p> <p>5. Drinking water availability</p> <p>6. Identification of disposal sites</p>	Contractor & DSC	<p>1 Construction camp established in open land near the project site. It is very far from habitation. Sanitation facilities at construction camp are not proper.</p> <p>2. No protected area within 200 m of project site</p> <p>3. No impact on traffic movement during construction.</p> <p>4. The site clearance activities have been carried out at excavated earth has been kept aside.</p> <p>5. Drinking water facilities available at site. The source of water is piped supply from natural source.</p> <p>6. The waste material generated due to clearance and demolition activities will be used to the extent possible in the project. Towards the end of construction phase, the site for disposal of waste material will be identified, keeping in view the quantity to be disposed off.</p>	<p>Sanitation at labour camp was not proper.</p> <p>First aid kits have been procured. But First aid training has not been imparted to appropriate number of workers.</p> <p>No demarcation of storage area for raw materials and waste.</p> <p>Signage depicting project details was not found.</p>	<p>1- Contractor was directed to increase the cleanliness and sanitation arrangements at the site. Contractor was directed to have a trained first aider and Give first aid training to appropriate number of workers.</p> <p>3- A training program on environmental safeguards has been conducted by the DSC Environmental expert after mobilisation of the contractor</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	7. Waste management on site		7. Presently, the waste generated is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU		
Construction	1. Improper stockpiling  2. Quarry/ Borrow pit operations  3. Stripping, stocking & preservation of top soil  4. Soil erosion  5. Water pollution due to fuel/lubricants  6. Siltation of water bodies  7. Generation of dust  8. Emission from construction		1. The main construction materials at present being used are bricks, cement, stones, sand and steel rods. These are not stocked properly, for which instructions were given. 2. Material is being purchased from licensed quarries. No quarrying/borrow pit operations. 3. Top soil generated from foundation work is preserved for reuse. 4. The soil erosion issue is not there as there is no cutting or steep slope issues involved in the project. 5. The construction vehicles usage is not much in the project. Fuel/ lubricants are not stored in larger quantities and brought as per demand. 6. No water body in immediate vicinity 7. Water sprinkling done. However, instructions were given to increase	The contractor shall depute one safety officer at site. Increase sprinkling frequency Cover stockpiled material properly	The contractor shall keep availability of adequate number of PPEs.  Contractor shall use man at work board and red tape barricades. Construction material and waste shall be stored in demarked area with barricades  Adequate number of dustbins should be kept at site and camp area..

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>vehicles</p> <p>9. Noise from construction equipment</p> <p>10. Material handling at site</p> <p>11. Disposal of construction waste/debris</p> <p>12. Sanitation facilities at project site</p> <p>13. Safety measures</p> <p>14. Risks force majeure</p> <p>15. Malaria risk</p> <p>16.Chance archaeological finds</p>		<p>the frequency.</p> <p>8.Frequency of transportation vehicles is very limited. The trucks carrying construction material have pollution under control certificates.</p> <p>9. In the present phase, the only noisy equipment used is concrete mixer and it is operated intermittently.</p> <p>10. Usage of PPE not proper and directions were given.</p> <p>11. Presently stored at site. Construction waste generated so far has been stored for utilization and suitable disposal further at designated location.</p> <p>12. Sanitation facility at site is not proper, for which directions were given.</p> <p>13. Usage of PPE was not proper. The contractor was instructed to procure first aid kits and to deploy safety officer to look after safety measures</p> <p>14.Risk Force Majeure situation has not occurred so far. Necessary action will be taken as per contract provisions</p> <p>15.Instructions issued regarding malaria risk and prevention were given.</p> <p>16.Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	17. Religious structures 18. Construction Staff causing disruption to migratory birds		inform to PIU and DSC, if any chance find is found. 17. The project is not impacting any religious structures 18. There is neither any route of migratory birds nor any location where migratory birds are visiting.		
Operation	1. Environmental conditions 2. Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, UTDB	The project not yet reached Operation phase	Not Applicable	Not applicable

Table 7(vii): EMP Monitoring Status Chart – Restoration and Adaptive Reuse of Pithoragarh Fort, Pithoragarh

IEE/EMP Components	Environmental Issues	Responsibility	Action during Reporting period	Compliance Issues	Corrective Actions
<b>UK/IDIPT/III/BHT/07</b>					
Location impacts	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural character of the surroundings.	PMU & Line Agency	The project site is having existing quarter and Parking	No issue	Not applicable
Design & pre construction impacts	1. Increased stormwater runoff from alteration of the site's natural drainage patterns due to additional structures in TRH complex and landscaping works in the area and on lake edge. 2. Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations 3. Integration of energy efficiency and energy conservation programs in design of subproject components	DSC & PIU	Impacts considered and measures integrated in design	No issue	Not applicable
Pre-construction activities by the contractor	1. Circulation plan during construction in the tourist destinations	Contractor & DSC	Circulation plan made		Not applicable
	2. Site clearance activities, including delineation of construction areas		Site clearance done by contractor		

IEE/EMP Components	Environmental Issues	Responsibility	Action during Reporting period	Compliance Issues	Corrective Actions
	3. Drinkingwater availabilityand water arrangement		Municipal water is being used by the labor	No issue	
	4. Identification ofsites for disposal of construction and demolition work		Construction/demolition waste is being disposed at designated site identified by PIU		
Construction impacts	1. Improperstockpiling of constructionmaterialscause impacts starting from obstructionof drainage, disturbance/safetyhazardto tourists,etc.	Contractor	Construction Material Properly stockpiled and brought as per demand	No issue	
	2. Stripping,stockingand preservationoftopsoil		Demolished waste and excavated material from working site and use / disposal of the same as per Mitigation measures in EMP	No issue	The liter bins needs to dispose at municipal dumping site frequently.
	3. SoilErosion		3. Construction is being done in place of existing structures as per EMP there is no issue of soil erosion.	No issue	Worker need to use safety shoes
	4. SoilandWater Pollution dueto fuelandlubricants, constructionwaste		4. Since no major equipment is being used at site storage is not required. Fuel is being carried as per requirement	Testing of water quality	Contractor has been instructed to get regular testing of air water and noise as per EMP
	5. Generation ofDust		5. Water sprinkling is being done regularly at construction site and construction material is being carried by covered truck.	Testing of ambient air quality	



IEE/EMP Components	Environmental Issues	Responsibility	Action during Reporting period	Compliance Issues	Corrective Actions
	6.Emission from construction vehicles, equipmentand machinery		6. Since no major equipment is being used at site storage of Fuel is not required. Fuel is being carried as per requirement	Testing of ambient air quality	
	7. Noisefromconstruction equipment		7. Only Vibrators and one concrete mixer is being used. No Major vehicles / equipment's are present at site.	Testing of ambient noise quality	
	8. MaterialHandlingatSite		8.Proper Material handling is being done for storage and disposal as per EMP	No issue	
	19. DisposalofConstructionWaste/Debris/CutMaterial		9. Demolished waste and excavated material from working site and use / disposal of the same as per Mitigation measures in EMP	No issue	
	10. SafetyMeasuresDuringConstruction		10. Using Personal Protective Equipment like helmets and shoes are being used by workers	No issue	Contractor has been instructed to provide other cautionary signage at Construction Sites
	11. RiskcausedbyForceMajeure		11. NA		
	12. MalariaRisk		12. Precaution being taken as per EMP	No issue	
O & M impacts	1. EnvironmentalConditions		Not Yet Started		
	2. Adequate drainageofsitearea				

Table 7 (viii) : EMP Monitoring Status Chart- Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
<b>UK/IDIPT-III/KOT/01</b>					
Location	<p>1 Siting of facilities</p> <p>2 Lack of sufficient Planning</p> <p>3 Impact on archaeological remains</p> <p>4 Other</p>	PMU & DSC	<p>1 Construction camp established in open land near multi facility complex. It is away from habitation.</p> <p>2. IEE and EMP have been prepared and EMP being complied with. The project planning done in advance and discussed in UTDB during DPR preparation.</p> <p>3. No site of archaeological remains in the vicinity</p> <p>4. Upper canal close to project influence area</p>	<p>1- Toilet Block at construction camp not completed.</p> <p>2- Contamination of upper Ganga canal water with earth and other construction material</p>	<p>1- The contractor has been instructed to complete the toilet block immediately.</p> <p>2- A strict vigil is kept by the DSC/PIU staff at site to ensure that no excavated earth or construction materials find their way in the canal and EMMP is strictly followed.</p>
Pre-construction activities by the Contractor	<p>1. Construction Camps</p> <p>2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas</p> <p>3. Circulation plan during construction</p> <p>4. Site clearance activities</p>	Contractor & DSC	<p>1 The construction camp established and workers are using this as accommodation. Drinking water facilities available at site. The source of water is existing bore well</p> <p>2. No protected area within 200 m of project site</p> <p>3. No impact on traffic movement during construction as there is no frequent to and fro transportation of materials from the construction camp site. The project site is on extreme left edge of NH-58 and construction activities are not interfering with traffic movement and tourist movement.</p> <p>4. This activity is over in the sub project.</p> <p>5. Potable drinking water is being</p>	<p>1- Toilet Block at construction camp not completed.</p> <p>2- First aid kits have not been procured.</p>	<p>1- The contractor has been instructed to complete the toilet block at construction camp immediately.</p> <p>2- The contractor has been instructed to procure at least two first aid kits. One to keep at camp and one at construction site.</p> <p>3- A training program on environmental safeguards has been conducted by the DSC Environmental expert after mobilisation of the contractor</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>5. Drinking water availability</p> <p>6. Identification of disposal sites</p> <p>7. Waste management on site</p>		<p>made available for the construction force through the existing bore well.</p> <p>6. The waste material generated due to clearance and demolition activities have been used to the extent possible in the project. Balance has been used in the fill works.</p> <p>7. The waste generated during the construction is segregated and stored at the site for possible reuse later. The waste disposal plan will be prepared in the end phase of construction period by the contractor and reviewed by the DSC and will be approved in consultation with PIU</p>		
Construction	<p>1. Improper stockpiling</p> <p>2. Quarry/ Borrow pit operations</p> <p>3. Stripping, stocking &amp; preservation of top soil</p> <p>4. Soil erosion</p> <p>5. Water pollution due to fuel/lubricants</p> <p>6. Siltation of water bodies</p>		<p>1. The main construction materials at present being used are bricks, cement, sand and steel rods. These are being stocked properly.</p> <p>2. The contractor is obtaining sand and sub grade from the licensed quarries. No borrow pit operations have been carried out so far.</p> <p>3- The top soil generated at Rest Shelter complex at Mela Ground and Silt excavated from Reservoir deeping due to excavation is kept aside. Similarly excavated scarified bituminous material at Solani Park has been used in the fill works.</p> <p>4. The soil erosion issue is not there as there is no cutting or steep slope</p>	<p>1- Based on the instructions the contractor has constructed toilet block. Maintenance is an issue.</p> <p>2- Some construction waste was seen scattered near the camp site at multi facility site.</p> <p>3- The PPE usage by the construction work force is very poor.</p> <p>4- Bathing facilities for women workers</p>	<p>1-The contractor has been advised to keep the toilet block neat and clean.</p> <p>2- The contractor has been instructed to segregate the waste at one location.</p> <p>3- The contractor has been advised to enforce the usage of PPEs by the workforce.</p> <p>4- The contractor has been advised to improve and maintain bathing facilities for women work force.</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>7. Generation of dust</p> <p>8. Emission from const<sup>n</sup> vehicles</p> <p>9. Noise from const<sup>n</sup> equipment</p> <p>10. Material handling at site</p> <p>11. Disposal of const<sup>n</sup> waste/debris</p>		<p>issues involved in the project.</p> <p>5. The fuel and lubricants are not stored at site as project is small in nature. These are purchased from market as per needs.</p> <p>6. The excavated earth is at multi facility complex. This earth has been kept aside and is away from Upper Ganga canal. This earth after completion of foundation works will be filled back. No chance of siltation in Canal due to construction activities.</p> <p>7. Generation of dust is on account of material handling at site. Necessary dust suppression measures such as water spray are taken up.</p> <p>8. The construction vehicles usage is not much in the project. It is only for the transportation of construction materials and a small concrete mixer at site. The trucks carrying construction material have pollution under control certificates. The mixer small generator and this operates intermittently.</p> <p>9. In the current project the only noisy equipment used is concrete mixer and it is operated intermittently. No excess noise generation is on account of construction activities. Noise monitoring is being taken up</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>12. Sanitation facilities at project site</p> <p>13. Safety measures</p> <p>14. Risks force majeure</p> <p>15. Malaria risk</p> <p>16. Chance archaeological finds</p> <p>17. Religious structures</p>		<p>10. The material handling at site is not proper as most of the workers were not seen using personal protective equipment during material handling.</p> <p>11. Brick work of guard wall construction is almost over in about 5.5 km length. Similarly pathway work at Solani Park Roorkee site has also been completed for 1 km length. in these works, there was generation of construction waste.</p> <p>12. The construction camp has toilet black. The toilets are not being maintained clean and tidy.</p> <p>13. The majority of the construction work force is not using personal protective equipment ( PPE) such as hand gloves, shoes, helmets, jackets , etc. The reason given is that they feel uncomfortable.</p> <p>14. Risk Force Majeure situation has not occurred so far. Necessary action will be taken as per contract provisions</p> <p>15. The project sites as well as workers' camp are close to Upper Ganga canal. There are chances of mosquito breeding although no water accumulation takes place at construction site. The contractor is instructed to keep good housekeeping at construction workers' camp and</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	18. Construction Staff causing disruption to migratory birds		<p>DSC staff at site monitors. Malarial risk is not anticipated.</p> <p>16. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. Necessary procedure such informing to state Archeological Department and waiting for their instruction, will be followed.</p> <p>17. The project is not impacting any religious structures</p> <p>18. The project site is located in a urban area and there is neither any route of migratory birds or any location where migratory birds are visiting.</p>		
Operation	<p>1-Environmental conditions</p> <p>2.Uncontrolled tourism</p> <p>3. Management of the toilet blocks</p> <p>4. Adequate drainage</p> <p>5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection</p> <p>6. Increased waste loads onto the existing waste disposal facilities</p>	PMU, UTDB	The project not yet reached to Operation phase	Not Applicable	Not applicable

Table 7(ix): EMP Monitoring Status Chart- Development of Tourism Infrastructure in SemMukhem

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
<b>UK/IDIPT-III/KOT/02</b>					
Location impacts	1. Siting of facilities 2. Lack of sufficient planning 3. Impact on archaeological remains 4. Other	PMU & Line Agency	1. The Development of Tourism Infrastructure at SemMukhem has been finalised in consultation with administration and local needs and meets all requirements of local laws. 2. No Action but IEE and EMP have been prepared as part of sub project preparation. The project components have been finalised after detailed review of DPR and local level consultations. 3. No site of archaeological remains in the vicinity, hence no action needed 4. The project being at higher elevation, accessibility may be limited during extreme weather conditions.	No issue related to location finalisation The sub project components are well defined.	This stage in the sub project is over.
Design & pre construction impacts	1. Impact on sensitive areas 2. Slope stability related issues 3. Increased storm water runoff 4. Impact on ground water quality 5. Impact on aesthetic appeal 6. Integration of energy conservation	DSC & PIU	1. No acquisition of any forest ( reserved/protected) area, hence no impacts and no action needed on this account. 2. The sub project construction works on pathway are on slope. The natural slope is maintained in the pathway and other construction works. The side slopes around pathway are compacted. 3. The storm water runoff issue will not be there at rest shelter or at pathway as these are in hilly terrain having quick natural drainage. No storm water runoff is anticipated at Mukhem village also. 4. No impact on ground water quality. Water requirement for construction is very less (<4000 liters/day) and is being met from nearby natural reservoir. The minor requirement for construction has no impact on reservoir or surrounding eco system. 5. No impact on aesthetic appeal.	1- - This stage in the sub project is over. Hence this is not applicable.	1 None as this is not applicable to reporting period.

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
			6. Integration of Energy conservation measures have been planned in the project design. The project plans to use solar lighting system.		
Pre-construction activities by the Contractor	1. Construction Camp 2. Defining of construction/work areas on ground for activities within 200m of the boundaries of the protected areas 3. Circulation plan during construction 4. Site clearance activities 5. Drinking water availability 6. Identification of disposal sites 7. Waste mgt on site	Contractor & DSC	1. The contractor has hired a house in the vicinity of Mela ground (location of rest shelter) and provided drinking water and sanitation facilities. 2. The project components are not using any area of forest although forest area is around pathway. The pathway is being constructed on already existing track outside forest area. 3. No impact on traffic movement due to construction activity has been noticed as vehicular movement due to traffic is insignificant. The tourist movement to SemNagraja temple will also not be affected. 4. The site clearance activities have been completed. No tree cutting was necessary. . 5. The drinking water requirements are being met from nearby natural sources. 6. Some waste material is generated rest shelter site due to construction activities. The waste disposal site will be identified in the later phase of construction period depending upon quantity of waste material to be disposed off. 7. The waste material generated is being collected and stored aside. The disposal plan will be prepared in later phase of construction period.	The preconstruction activities are over and construction works are in progress at all locations of sub project. Hence this is not applicable	None as this is not applicable to reporting period.
Construction impacts	1. Improper stockpiling 2. Quarry/ Borrow pit operations	Contractor and DSC	1. The contractor is using cement, steel, sand and subgrade at pathway sites, temple site and at Mela Ground sites. At Temple renovation site at Mukhem village, some storage of construction materials was not proper as it was obstructing movement of locals. 2. The contractor is obtaining sand and subgrade from the licensed quarries and has been instructed to submit	1- Environmental monitoring during post monsoon season conducted, but monitoring report not submitted. 2- Use of personal protective	1- The contractor has not carried out monitoring for winter season. . The contractor has been advised to



IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>3.Stripping, stocking &amp; preservation of top soil</p> <p>4.Soil erosion</p> <p>5. Water pollution due to fuel/lubricants</p> <p>6. Siltation of water bodies</p> <p>7. Generation of dust</p> <p>8.Emission from const<sup>n</sup>vehicles and equipment</p>		<p>copy of license of the quarry. The borrow pits for the projects have not been operated so far.</p> <p>3. The excavated earth for foundation works of rest shelter has been kept aside and will be reused for filling. The Mela ground is a waste and barren land so top soil is of no importance as it has rocky and non-fertile nature. The excavated earth from reservoir deepening near Mela ground has also been kept aside and being used in filling works of retaining wall of this reservoir.</p> <p>4. So far in the construction works no soil erosion issue has been identified. In the pathway works natural slope is maintained.</p> <p>5. The fuel and lubricants are not stored at site and these are purchased on need basis so question of water pollution due to fuel and lubricants is not there.</p> <p>6. The project involves deepening of reservoir near Mela Ground. The reservoir excavation work has been completed in post monsoon season. The excavated earth mainly comprising of silt has been kept aside. The side slopes of reservoir will be stabilized through compaction and pitching. The excavated earth is being used in fill works of retaining wall of this reservoir.</p> <p>7. The generation of dust is there from construction material handling such as sand, sub grade and cement. Necessary measures for dust suppression are taken at site as per needs. These measures include water spray and keeping sand and cement inside the cover shed. Keeping sand piles in semi wet form through water spray.</p>	<p>equipment at temple site to be enforced.</p> <p>3- Waste material from rest shelter construction site and excavated earth from reservoir site to be stored and reutilized.</p> <p>4- Proper storage of construction material at Mukhem village temple site and pathway site at Mukhem village so that villagers' movement is not restricted.</p>	<p>submit monitoring report of post monsoon season immediately. Failing submission of report, DSC will organize monitoring at risk and cost of contractor.</p> <p>2- The contractor has been advised to enforce use of PPEs by the workers at Mukhem village temple site as well as village pathway construction site.</p> <p>3-The contractor has been instructed to prepare plan for waste disposal from various sub project locations specially the excavated earth from the reservoir site. The earth should be used in fill works of retaining wall of reservoir.</p> <p>4- The contractor has been instructed to store construction material properly at Mukhem village Temple site as well as village pathway construction sites so as</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>9. Noise from const<sup>n</sup> equipment</p> <p>10. Material handling at site</p> <p>11. Disposal of const<sup>n</sup> waste/debris</p> <p>12. Safety measures</p> <p>13. Risks force majeure</p>		<p>8. At projectsite no construction vehicles are used except trucks bringing construction materials at site. These trucks/tempo have pollution under control certificates. The only construction equipment used at site is currently mixer, which is Diesel Generator operated. This mixer is operating intermittently and as such there is no issue of air emissions. The contractor has been advised to carry out ambient air quality monitoring at two locations in project area.</p> <p>9. In the current construction phase of project mixer is the only noise generating equipment is in operation. No noise issue has been felt during the site visits. This is operated intermittently. At Mukhem village temple site, and at pathway construction works are not taken up during night time.</p> <p>10. The material handling by the workers at site is proper as construction were seen using personal protective equipment such as gloves, shoes, helmets, etc. Some workers were seen not using personal protective equipment at Mukhem village Temple site. The contractor has been instructed to enforce use of personal protective equipment.</p> <p>11. At present construction waste /debris generation was seen at rest shelter site at Mela Ground. The excavated earth has also been generated at Reservoir site. The maximum construction waste will be reutilized. The material which cannot be used will be disposed off. For this a disposal plan will be prepared in later phase of construction period. The contractor has been advised to segregate waste and store at one place at Mela Ground.</p>		<p>to avoid inconvenience to the villagers.</p>

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
	<p>14. Malaria risk</p> <p>15. Chance archaeological finds</p> <p>16. Religious structures</p> <p>17. Construction Staff causing disruption to migratory birds</p>		<p>12. The contractor has procured personal protective equipment such as helmets, gum boots, jackets, gloves, etc. These are being used. Some of the workers were seen not using PPEs particularly at Mukhem village temple site. The contractor has been advised to enforce use of PPEs. The work force of the contractor has been sensitized for use of PPEs by the DSC environmental expert during site visits.</p> <p>13. So far conditions for Force Majeure have not been faced at the project site.</p> <p>14. The project site being at an elevated height in a hilly terrain where low temperatures prevail. No mosquito breeding has been felt. However, contractor has been instructed to take necessary measures in consultation with local state health department.</p> <p>15. Chance Archaeological finds have not been found so far during the construction works. The contractor has been instructed to inform to PIU and DSC, if any chance find is found. Necessary procedure such informing to state Archeological Department and waiting for their instruction, will be followed.</p> <p>16. The existing temple at Mukhem village is being renovated so this will have a positive impact.</p> <p>17. No action needed as the project site is not close any route of migratory birds or any location where migratory birds are visiting.</p>		

IEE/EMP Component	Environmental issues	Responsibility	Actions during Reporting Period	Compliance issues	Corrective actions
O & M impacts	1. Environmental conditions 2. Uncontrolled tourism 3. Management of the toilet blocks 4. Adequate drainage 5. Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection 6. Increased waste loads onto the existing waste disposal facilities	PMU, Contractor & DSC	Not Applicable as project not yet completed	Not Applicable	Not Applicable

## **7. Approach & Methodology engaged for environmental monitoring of the project**

15. Continuous monitoring of EMP implementation is being carried out by DSC, PIU and PMU.
16. Concerned staff of DSC and PIU visit the construction sites and report to Team Leader DSC and PMC about issues/ problems related to environmental non-compliance. Necessary directions, in case of non-compliance are being issued to the contractors on the site and through letters about the procedures to resolve the problems/issues or requirements. The Safeguards Staff of DSC conduct regular site visits to monitor the implementation of safeguards measures on sites.

## **8. Monitoring of environmental receptors/ attributes**

### **Monitoring basis**

17. Monitoring for the implementation of Environmental Monitoring Plan/Management Plan is required to be done to check if any adverse impact is being caused by the construction activities. The monitoring of these variables is to be carried out in construction sites within 100 m impact zone of the sub project.
18. The monitoring of environmental variables is to be carried out as per the agreed Environmental Monitoring Plan.

### **Type of environmental receptor/ attribute to be monitored**

19. The environmental attributes to be monitored include the air, noise and water quality parameters at the construction sites in sub project sites. The air quality parameters monitored include RSPM (PM<sub>10</sub>), PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub>. The water quality parameters include temperature, pH, electrical conductivity (EC), dissolved oxygen (DO), biochemical oxygen demand (BOD), total suspended solids (TSS), total dissolved solids (TDS) and turbidity. In case of noise the day and night time Leq values are monitored.

### **Methods of monitoring and equipment used**

20. The parameters and standard methodology used for monitoring is given in Table 8.

Table 8: Parameters and Methodology for Environmental Monitoring

Parameter	Methodology
(PM <sub>10</sub> )	High Volume Sampler method (attached with cyclone)/Respirable Dust samplers.
(PM <sub>2.5</sub> )	PM <sub>2.5</sub> sampler, Gravimetric method
SO <sub>2</sub>	IS Modified West and Gaeke Method
NO <sub>2</sub>	Jacob &Hochheiser Modified (Sodium Arsenite) Method.
Noise Level	Direct Reading Sound Level Meter.
Temperature	Digital/Mercury Thermometer Method.
pH	Electrometric Method.
EC	Electrometric Method.
DO	Winkle's Method Using Azide Modification
BOD <sub>5</sub>	Five Days BOD as per APHA 2005
TDS	Digital Meter Method.
TSS	Gravimetry (Filtration and Drying at 105°C)
Turbidity	Nephelo Turbidity Method.

## 9. Implementation of Environmental Monitoring Plan

21. Implementation of Environmental Monitoring Plan for sub projects is shown in Table 9.

**Table 9 (i): Implementation of Environmental Monitoring Plan- For Projects under DSC Dehradun**

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>UK/IDIPT-III/DDN/01 Development of Tourism Infrastructure In Kartikeya Swami Circuit (Lot-1) (Durgadhar Temple)</b>						
<b>Noise</b>	<b>30/09/2016</b>	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	- Day Time- 49.5, 44.5, 50.0 Night Time- 38.1,31.4,40.0	- Day Time-51.7, 42.8, 55.0 Night Time- 43.1,34.2,45.0	Within permissible limits
<b>Air Quality</b>	<b>30/09/2016</b>	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	100	59.12	56.10	Within permissible limits
		Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	60	25.05	26.42	
		Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	80	8.14	7.65	
		Nitrogen Dioxide (NO <sub>2</sub> ) µg/m <sup>3</sup>	80	19.30	19.32	
		Carbon Monoxide (CO), µg/m <sup>3</sup>	4	0.40	0.26	
<b>Water Quality</b>	<b>09/03/2016</b>	<b>Drinking water</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.25 2. Colour <5 3. Turbidity – BDL 4. Odour – Agreeable 5. Taste – Agreeable 6. Total Hardness -210.00 7. Calcium as Ca- 56.11		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
				8. Alkalinity - 186.00 9. Chloride- 61.07 10. Magnesium and Mg- 17.98 11. Total Dissolved Solids – 190.00 12. Iron -0.12 13. Copper<0.05 14. Total Coliform <2/100ml  E-Coli – Absent		
<b>UK/IDIPT-III/DDN/02Development of Tourism Infrastructure in Kartikeya Swami Circuit (Kartikeya Swami Temple)</b>						
Noise	30/09/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 54.1, 39.6, 55.0  Night Time- 42.5, 34.2, 45.0		Within permissible limits
Air Quality	30/09/2016	Particulate Matter (PM10), µg/m3 Particulate Matter (PM2.5), µg/m3 Sulphur Dioxide (So2). µg/m3 Nitrogen Dioxide (No2) µg/m3 Carbon Monoxide (Co), µg/m3	NAAQS Standards	62.70  29.12  8.30  16.20  0.32		Within permissible limits



Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Harshil)</b>						
Noise	14/10/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 52.4, 39.2, 55.0 Night Time- 44.9, 35.0, 45.0		Within permissible limits
Air Quality	14/10/2016	Particulate Matter (PM10), µg/m3 Particulate Matter (PM2.5), µg/m3 Sulphur Dioxide (So2). µg/m3 Nitrogen Dioxide (No2) µg/m3 Carbon Monoxide (Co), µg/m3	NAAQS Standards	56.54  26.47  7.10  17.25  0.28	Industrial, Residential, Rural and other Areas	Within permissible limits
Water Quality	14/10/2016	Drinking water	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.25 2. Colour <5 3. Turbidity – BDL 4. Odour – Agreeable 5. Taste – Agreeable 6. Total Hardness -212.20 7. Calcium as Ca- 70.25 8. Alkalinity - 185.50 9. Chloride- 52.00 10. Magnisiu		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
				m and Mg-18.42 11. Total Dissolved Solids – 280.50 12. Iron -0.13 13. Copper<0.05 14. Total Coliform <2/100ml  E-Coli – Absent		
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Pokhta, Kanakchauri)</b>						
Noise	30/09/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 51.6, 43.9, 55.0  Night Time- 41.8, 33.2, 45.0		Within permissible limits
Air Quality	30/09/2016	Particulate Matter (PM10), µg/m3  Particulate Matter (PM2.5), µg/m3  Sulphur Dioxide (So2). µg/m3  Nitrogen Dioxide (No2) µg/m3  Carbon Monoxide (Co), µg/m3	NAAQS Standards	61.20  31.30  8.99  15.09  0.35		Within permissible limits

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Kaviltha)</b>						
Noise	30/09/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 49.5, 40.2, 55.0 Night Time- 42.8, 32.0, 45.0		Within permissible limits
Air Quality	30/09/2016	Particulate Matter (PM10), µg/m3 Particulate Matter (PM2.5), µg/m3 Sulphur Dioxide (So2). µg/m3 Nitrogen Dioxide (No2) µg/m3 Carbon Monoxide (Co), µg/m3	NAAQS Standards	57.20  26.00  8.10  16.14  0.28		Within permissible limits
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Mukhwa)</b>						
Noise	14/10/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 53.9, 40.5, 55.0 Night Time- 42.8, 32.4, 45.0		Within permissible limits
Air Quality	14/10/2016	Particulate Matter (PM10), µg/m3 Particulate Matter (PM2.5), µg/m3	NAAQS Standards	58.12		Within permissible limits

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
		Sulphur Dioxide (So <sub>2</sub> ). µg/m <sup>3</sup> Nitrogen Dioxide (No <sub>2</sub> ) µg/m <sup>3</sup> Carbon Monoxide (Co), µg/m <sup>3</sup>		28.54  7.68  17.15  0.26		
Water Quality	14/10/2016	Drinking water	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.40 2. Colour <5 3. Turbidity –BDL 4. Odour – Agreeable 5. Taste – Agreeable 6. Total Hardness - 275.20 7. Calcium as Ca- 75.36 8. Alkalinity -178.45 9. Chloride -55.24 10. Magnesium and Mg- 19.30 11. Total Dissolved Solids – 332.90 12. Iron - 0.15 13. Copper< 0.05		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
				14. Total Coliform <2/100ml E-Coli – Absent		
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Niti)</b>						
Noise	30/09/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 52.5, 40.4, 55.0 Night Time- 42.5, 33.2, 45.0		Within permissible limits
Air Quality	30/09/2016	Particulate Matter (PM10), µg/m3 Particulate Matter (PM2.5), µg/m3 Sulphur Dioxide (So2). µg/m3 Nitrogen Dioxide (No2) µg/m3 Carbon Monoxide (Co), µg/m3	NAAQS Standards	60.10  28.12  7.08  17.32  0.25		Within permissible limits
Water Quality	30/09/2016	Drinking water	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.25 2. Colour <5 3. Turbidity – BDL 4. Odour – Agreeable 5. Taste – Agreeable 6. Total Hardness		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
				-320.00 7. Calcium as Ca- 70.31 8. Alkalinity - 220.14 9. Chloride- 70.14 10. Magnesium and Mg- 26.40 11. Total Dissolved Solids – 350.80 12. Iron -0.15 13. Copper<0.05 14. Total Coliform <2/100ml  E-Coli – Absent		
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Phalasi)</b>						
<b>Noise</b>	<b>30/09/2016</b>	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 51.3, 41.6, 55.0  Night Time- 44.5, 32.9, 45.0		Within permissible limits
<b>Air Quality</b>	<b>30/09/2016</b>	Particulate Matter (PM10), µg/m3  Particulate Matter (PM2.5), µg/m3  Sulphur Dioxide (So2). µg/m3  Nitrogen Dioxide	NAAQS Standards	59.56   25.85		Within permissible limits

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
		(No <sub>2</sub> ) µg/m <sup>3</sup> Carbon Monoxide (Co), µg/m <sup>3</sup>		6.90  18.78  0.27		
<b>UK/IDIPT-III/DDN/03“Conservation &amp; Development of Rural Tourism Sites of Rudraprayag, Chamoli and Uttarkashi Districts of Uttarakhand” (Tungnath)</b>						
<b>Noise</b>	<b>30/09/2016</b>	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Day Time- 50.2, 39.8, 55.0  Night Time- 44.5, 34.6, 45.0		Within permissible limits
<b>Air Quality</b>	<b>30/09/2016</b>	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup> Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup> Sulphur Dioxide (So <sub>2</sub> ), µg/m <sup>3</sup> Nitrogen Dioxide (No <sub>2</sub> ) µg/m <sup>3</sup> Carbon Monoxide (Co), µg/m <sup>3</sup>	NAAQS Standards	55.74  25.56  8.44  17.10  0.24		Within permissible limits

Table 9 (ii): Implementation of Environmental Monitoring Plan- For Projects under DSC  
Kotdwara

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project implementation	Remarks
<b>UK/DIPT-III/KOT/01 Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar</b>						
<b>Noise</b>	Post Monsoon Season	Sound Level Leq. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	1-Leq ( Day) 71.50 dB( A) at Prem Nagar Ashram to RishikulChowk and 71.0 dB(A) at Singh Dwar to Premnagar Ashram chowk	1-Leq ( Day) 64.0 dB( A) at Solani Park Roorkee site  2- No monitoring done in night time  3- Monitoring was not carried out at Haridwar site as no construction work was in progress at Multi facility center site.	Values in day time are exceeding the limits because of vehicular noise on the canal road as a lot people visit Solani park for relaxation. In night time monitoring has not been carried out as no construction activity is taken up during night time.
<b>Air Quality</b>	Post Monsoon Season	SO <sub>2</sub> , NO <sub>X</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards		Industrial, Residential, Rural and other Areas	All parameters of ambient air quality are well within the limits.
		Particulate Matter < 10 micron	100	82.70ug/m <sup>3</sup> atPremNagar AshramtoRishikulC howkstretchand 82.40ug/m <sup>3</sup> atSingh DwarChowktoPrem NagarAshramChowk	82.3ug/m <sup>3</sup> atSolani Park construction site	
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	57.30ug/m <sup>3</sup> atPremNagar AshramtoRishikulC howkstretch and 57.50ug/m <sup>3</sup> atSingh DwarChowk toPremNagarAshramChowk	56.7ug/m <sup>3</sup> atSolani Park construction site	



Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Sulphur dioxide, (SO <sub>2</sub> )	80 µg/m <sup>3</sup>	18.20ug/m <sup>3</sup> at PremNagarAshram toRishikulChowk stretch and 18.50ug/m <sup>3</sup> atSinghDwarChowkto PremNagarAshramChowk	18.50ug/m <sup>3</sup> at Solani Park construction site	
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	14.1ug/m <sup>3</sup> atPremNagarAshramtoRishikulChowkstretch and 14.30ug/m <sup>3</sup> atSinghDwarChowkto PremNagarAshramChowk	14.2 ug/m <sup>3</sup> atSolani Park construction site	
		Carbon Monoxide (CO)	02 mg/m <sup>3</sup> for 08 hrs	Not Detected in both locations	Not Detected in both locations	

Component	Periods of monitoring	Parameters/Polutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>Water Quality</b>	Post Monsoon Season	<b>Parameters specified in monitoring plan for Upper Ganga Canal and Drinking Water</b> <b>BOD<sub>3</sub> at 27°C</b> <b>DO</b> <b>Iron</b> <b>Lead</b> <b>Nickel</b> <b>Oil &amp; grease</b> <b>pH</b> <b>Zinc (as Zn)</b> <b>BACTERIOLOGICAL TESTS</b> Total Coli form Organisms 100 ml. at 37°C (MPN) Feacal Coli form / 100ml	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1- Colour- <5Hazenunits 2- Agreeable 3- Turbidity- Nil 4-pH-7.4 5- TotalHardness 169mg/l 6- Iron asFe- Nilmg/l 7- Chlorides- 75mg/l 8- Fluoride- 0.8mg/l 9- TDS- 378mg/l 10- TotalColiform -NotDetected 11- Ecoli- NotDetected	1- Colour= <5 Hazen units 2- Odour = Agreeable 3- Turbidity = Nil 4- pH=7.3 5- Total Hardness =174 mg/l 6- Iron as Fe = Nil mg/l 7- Chlorides=75 mg/l 8- Fluoride - 0.8 mg/l 9- TDS=381 mg/l 10- Total Coli form =Not Detected 11- Ecoli=Not Detected	All parameters of drinking water at Solani park site camp are well within the limits of Drinking water specified in IS: 10500
<b>UK/IDIPT-III/KOT/02 Development of Tourism Infrastructure in SemMukhem</b>						
<b>Noise</b>	Post Monsoon Season	Sound Level Leq. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Leq ( Day) at Mela Ground - 57 dB(A)	Leq ( Day) at Mela Ground - 57 dB(A)	The noise level is well within limits during day. No monitoring carried out during night time as construction activities are not carried out during night time.
<b>Air Quality</b>	Post Monsoon Season	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards	-	Industrial, Residential, Rural and other Areas	All monitored ambient air quality parameters are

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Particulate Matter < 10 micron	100	75.70ug/m3atMelaGround	74.10ug/m3 at Mela Ground	well within the stipulated limits of air quality.
		Particulate Matter < 2.5 micron	60µg/m3 80 µg/m3	53.2ug/m3 14.50ug/m3	52.50ug/m3 15.20ug/m3	
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m3 02 mg/m3 for 08 hrs	11.6ug/m3 NotDetected(AllvaluesmonitoredatMelaGround)	11.40ug/m3 Not Detected ( All values monitored at Mela Ground)	
		Nitrogen dioxide(NO <sub>2</sub> )				
		Carbon Monoxide (CO)				
<b>Water Quality</b>	Post Monsoon Season	<b>Parameters specified for Drinking water in IS: 10500</b>	Drinking Water Standards specified in IS: 10500	1- Colour-<5Hazenunits 2- Agreeable 3- Turbidity- Nil4-pH-7.3 5-TotalHardness 175mg/l 6- IronasFe- Nilmg/l 7- Chlorides- 74mg/l 8- Fluoride- 0.77mg/l 9- TDS- 378mg/l10- TotalColiform- NotDetected 11-Ecoli- NotDetected	1- Colour = <5 Hazen units 2- Odour =Agreeable 3- Turbidity = Nil mg/l 4- pH= 7.3 5- Total Hardness = 174 mg/l 6- Iron as Fe = Nil mg/l 7- Chlorides= 76 mg/l 8- Fluoride = 0.77 mg/l 9- TDS- 377 mg/l 10- Total Coli form - Not Detected 11- Ecoli - Not Detected	All monitoring parameters are for drinking water available at Mela ground where construction works were in Progress. The monitoring parameters of drinking water are well within the stipulated limits of Drinking Water specified in IS: 10500.

Table 9 (iii): Implementation of Environmental Monitoring Plan- For Projects under DSC Bhimtal

Compon ent	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>Restoration and Adaptive Reuse of Champawat Fort (Banasur)</b>						
<b>Noise</b>	15.11.2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time (Residential Zone)	Near Construction site, Champawat  Lmax -50.8(Day), 42.2 (Night) dB(A)  Lmin – 40.3(Day), 34.5 (Night) dB(A)  Leq – 43.2(Day), 35.2 (Night) dB(A)	Near Construction site, Champawat  Lmax -51.4(Day), 41.2 (Night) dB(A)  Lmin – 40.5(Day), 35.5 (Night) dB(A)  Leq – 44.4 (Day), 38.4(Night) dB(A)	Values are well within permissible level
<b>Air Quality</b>	15.11.2016	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards		Industrial, Residential, Rural and other Areas	All parameters of ambient air quality are well within the limits.
		Particulate Matter < 10 micron	100 µg/m <sup>3</sup>	60.10 µg/m <sup>3</sup> at Near Construction site, Champawat		
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	34.10 µg/m <sup>3</sup>		
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m <sup>3</sup>	7.10 µg/m <sup>3</sup>		
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	19.30 µg/m <sup>3</sup>		
		Carbon Monoxide (CO) mg/m <sup>3</sup>	02 mg/m <sup>3</sup> for 08 hrs	0.20 mg/m <sup>3</sup>		
<b>Air Quality</b>	15.11.2016	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All parameters of ambient air quality are well within the limits.
		Particulate Matter < 10 micron	100 µg/m <sup>3</sup>	62.10 µg/m <sup>3</sup> at Near Back Side, Champawat		
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	30.15 µg/m <sup>3</sup>		
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m <sup>3</sup>	7.18µg/m <sup>3</sup>		

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	17.10µg/m <sup>3</sup>		
		Carbon Monoxide (CO) mg/m <sup>3</sup>	02 mg/m <sup>3</sup> for 08 hrs	0.22 mg/m <sup>3</sup>		
<b>Water Quality</b>	15.11.2016	<b>Drinking water Village :-Near Construction Site Champawat</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.20 2. Colour <5 3. Turbidity –BDL 4. Odour –Agreeable 5. Taste –Agreeable 6. Total Hardness - 189.00 7. Calcium as Ca- 70.20 8. Alkalinity -138.00 9. Chloride-20.10 10. Magnesium and Mg- 18.10 11. Total Dissolved Solids – 325.24 12. Iron -0.10 13. Copper<0.05 14. Total Coliform <2/100ml 15. E-Coli –Absent		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500
<b>Noise</b>	Summer Season	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time (Residential Zone)	Baseline monitoring was not done by DSC.  Baseline Monitoring was done by contractor in winter season	At Village Karnkart  Lmax -49.3(Day), 41.4 (Night) dB(A)  Lmin – 39.1(Day), 32.0(Night) dB(A)	Values are well within permissible level
<b>Noise</b>	Summer Season	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 50 dB( A) for Day Time and 40 dB( A) for Night Time (Silent Zone)		At Project Site  Lmax -48.2(Day),42.0 (Night)dB(A)  Lmin – 39.6(Day),31.4 (Night)dB(A)	Values are well within permissible level
<b>Air Quality</b>	Winter Season	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All parameters of ambient air quality are well within the limits.
		Particulate Matter < 10 micron	100 µg/m <sup>3</sup>	65.50 µg/m <sup>3</sup> at Near Village,PostKarnkart		

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	36.50 µg/m <sup>3</sup> at Near Village,PostKamkart		
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m <sup>3</sup>	6.30 µg/m <sup>3</sup> at Near Village,PostKamkart		
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	14.30 µg/m <sup>3</sup> at Near Village,PostKamkart		
		Carbon Monoxide (CO) mg/m <sup>3</sup>	02 mg/m <sup>3</sup> for 08 hrs	0.38 mg/m <sup>3</sup> at Near Village,PostKamkart		
<b>Water Quality</b>	Summer Season	<b>Drinking water Village :- BongaMehra</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.44 2. Colour <5 3. Turbidity –BDL 4. Odour –Agreeable 5. Taste –Agreeable 6. Total Hardness - 310.30 7. Calcium as Ca- 80.10 8. Alkalinity -251.20 9. Chloride-68.42 10. Magnesium and Mg- 24.35 11. Total Dissolved Solids – 354.09 12. Iron -0.12 13. Copper<0.04 14. Total Coliform <2/100ml 15. E-Coli –Absent		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500
<b>Water Quality</b>	Summer Season	<b>Surface water Village :- BongaMehra</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.0 2. Colour<5 3. Turbidity –BDL 4. Total Hardness - 362.50 5. Calcium as Ca -98.52 6. Total Alkalinity -271.44 7. Chloride-65.30 8. Magnesium Hardness - 36.34 9. Sulfate as SO <sub>4</sub> - 52.30		

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
				10. Nitrate as NO <sub>3</sub> -6.44 11. Flouride as F -0.8 12. Sodium as Na – 19.70 13. Potassium as K- 3.70 14. TKN as N- 1.40 15. Total Phosphorous - 0.26 16. COD-4.15 17. Phenolic Compound - <0.002 18. Iron as Fe-0.15 19. Boron -0.26 20. Sodium Absorption ratio -2.84 21. Free Ammonia as N- 0.82 22. Dissolved Oxygen - 7.00 23. BOD(3 days at 27) - 2.00 24. Zinc as Zn- 0.14 25. Arsanic as As -<0.012 26. Total dissolved Solids - 420		
<b>Conservation of Cultural Heritage and Urban Place- making in Nanital</b>						
Noise	Summer Season	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 65 dB( A) for Day Time and 55 dB( A) for Night Time (Commercial Zone)	At Nainilake near Dam Wall, Tallital  Lmax -61.2(Day), 47.0(Night) dB(A)  Lmin – 38.2(Day), 34.5(Night) dB(A)		Values are well within permissible level
Noise	Summer Season	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 65 dB( A) for Day Time and 55 dB( A) for Night Time (Coomercial Zone)	At Nainilake near Dam Wall, Tallital  Lmax -63.4(Day),44.3 (Night)dB(A)  Lmin – 42.8(Day),32.2 (Night)dB(A)		Values are well within permissible level
Noise	15.11.2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for	At Near Construction Site Library		Values are well within

Compon ent	Periods of monitoring	Parameters/Polluta nts	Standard	Base line status	Monitoring result during project Implementation	Remarks
			Day Time and 45 dB( A) for Night Time (Commercial Zone)	Lmax -52.3(Day),43.1 (Night)dB(A) Lmin – 32.1(Day),35.2 (Night)dB(A) Leq- 44.2, 38.1		permissible level
Noise	15.11.2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time (Commercial Zone)	At Near Back Side Library Lmax -53.7(Day),43.1 (Night)dB(A) Lmin – 38.1(Day),31.8 (Night)dB(A) Leq- 42.0, 37.2		Values are well within permissible level
Air Quality	Summer Season	SO <sub>2</sub> , NO <sub>X</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All monitored ambient air quality parameters are well within the stipulated limits of air quality.
		Particulate Matter < 10 micron	100	56.62ug/m3 at NainilakeTallital		
		Particulate Matter < 2.5 micron	60µg/m3 80 µg/m3	25.19ug/m3 7.54ug/m3		
		Sulphur dioxide,(SO <sub>2</sub> )  Nitrogen dioxide(NO <sub>2</sub> )  Carbon Monoxide (CO) mg/m3	80 µg/m3  02 mg/m3 for 08 hrs	17.40 ug/m3  0.22 mg/m3 for 08 hrs		
Air Quality	15.11.2016	SO <sub>2</sub> , NO <sub>X</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All monitored ambient air quality parameters are well within the stipulated limits of air quality.
		Particulate Matter < 10 micron	100	66.18 ug/m3 at Near Constructio site Library Nainital		



Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Particulate Matter < 2.5 micron Sulphur dioxide,(SO <sub>2</sub> ) Nitrogen dioxide(NO <sub>2</sub> ) Carbon Monoxide (CO) mg/m <sup>3</sup>	60µg/m <sup>3</sup> 80 µg/m <sup>3</sup> 80 µg/m <sup>3</sup> 02 mg/m <sup>3</sup> for 08 hrs	35.10 ug/m <sup>3</sup> 7.34ug/m <sup>3</sup> 18.15ug/m <sup>3</sup> 0.20 mg/m <sup>3</sup> for 08 hrs		
<b>Air Quality</b>	15.11.2016	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			
		Particulate Matter < 10 micron	100	68.15ug/m <sup>3</sup> at Near Back side Library Nainital		
		Particulate Matter < 2.5 micron Sulphur dioxide,(SO <sub>2</sub> ) Nitrogen dioxide(NO <sub>2</sub> ) Carbon Monoxide (CO) mg/m <sup>3</sup>	60µg/m <sup>3</sup> 80 µg/m <sup>3</sup> 80 µg/m <sup>3</sup> 02 mg/m <sup>3</sup> for 08 hrs	38.12ug/m <sup>3</sup> 9.08 ug/m <sup>3</sup> 17.10ug/m <sup>3</sup> 0.20 mg/m <sup>3</sup> for 08 hrs		
<b>Water Quality</b>	Summer Season	<b>Drinking water (Tap Water)</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.38 2. Colour <5 3. Turbidity –BDL 4. Odour –Agreeable 5. Taste –Agreeable 6. Total Hardness - 332.00 7. Calcium as Ca- 82.20		All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Compon ent	Periods of monitoring	Parameters/Polluta nts	Standard	Base line status	Monitoring result during project Implementation	Remarks
				8. Alkalinity -254.00 9. Chloride-68.40 10. Magnisium and Mg- 28.62 11. Total Dissolved Solids – 365.00 12. Iron -0.12 13. Copper<0.05 14. Total Coliform <2/100ml 15. E-Coli –Absent		
Water Quality	15.11.2016	Surface water – Naini lake	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.80 2. Colour<5 3. Turbidity –BDL 4. Total Hardness - 362.50 5. Calcium as Ca -98.52 6. Total Alkalinity - 271.44 7. Chloride-65.30 8. Magnisium Hardness -36.34 9. Sulfate as SO4- 52.30 10. Nitrate as NO3-2.44 11. Flouride as F -0.8 12. Sodium as Na – 19.70 13. Potassium as K- 3.70 14. TKN as N- 1.40 15. Total Phosphorous - 0.26 16. COD-4.15 17. Phenolic Compound - <0.002 18. Iron as Fe-0.15 19. Boron -0.26 20. Sodium Absorption ratio -2.84 21. Free Ammonia as N- 0.82 22. Dissolved Oxygen - 7.00 23. BOD(3 days at 27) - 10.00 24. Zinc as Zn- 0.14 25. Arsanic as As - <0.012 26. Mercury as Hg -	1. pH-7.85 2. Colour<5 3. Turbidity –BDL 4. Total Hardness - 202.10 5. Calcium as Ca - 102.50 6. Total Alkalinity - 273.10 7. Chloride-43.25 8. Magnisium Hardness -37.31 9. Sulfate as SO4- 40.12 10. Nitrate as NO3- 2.30 11. Flouride as F -0.2 12. Sodium as Na – 17.31 13. Potassium as K- 4.15 14. TKN as N- 1.34 15. Total Phosphorous - 0.20 16. COD-3.10 17. Phenolic Compound - <0.002 18. Iron as Fe-0.11 19. Boron -0.15 20. Sodium Absorption ratio - 1.23 21. Free Ammonia as N-0.62 22. Dissolved Oxygen -6.00	

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
				<0.002  Total dissolved Solids -420	23. BOD(3 days at 27) -8.00 24. Zinc as Zn- 0.11 25. Arsanic as As - <0.012 26. Mercury as Hg - <0.002 27. Total dissolved Solids -365	
Water Quality	15.11.2016	Surface water – Library	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.40 2. Colour<5 3. Turbidity –BDL 4. Odour- Agreeable 5. Taste- Agreeable 6. Total Hardness - 180.00 7. Calcium as Ca - 66.10 8. Total Alkalinity - 140.00 9. Chloride-16.10 10. Magnesium Hardness -17.25 11. Sulfate as SO4- 340.10 12. Iron as Fe-0.11 13. Copper as Cu- <0.05 14. Total Coliform- <2/100 ml 15. E.Coli-Absent		
<b>Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)</b>						
Noise	15/11/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time (Residential Zone)	At VikashBhawanDistt. Almora  Lmax - 48.9(Day),39.8(Night) dB(A)  Lmin – 44.2(Day), 32.5(Night) dB(A)		Values are well within permissible level
Noise	15/11/2016	Sound Level Lmax, Lmin. dB(A)	Noise Standards for 55 dB( A) for Day Time and 45 dB( A) for Night Time	Near Construction Site  Lmax -52.0(Day),42.4 (Night)dB(A)  Lmin – 44.1(Day),34.3	Near Construction Site  Lmax -46.1(Day),37.2 (Night)dB(A)  Lmin – 35.2(Day),31.2	Values are well within permissible level

Compon ent	Periods of monitoring	Parameters/Polluta nts	Standard	Base line status	Monitoring result during project Implementation	Remarks
			(Residential Zone)	(Night)dB(A)	(Night)dB(A) Leq – 43.4(Day),34.4 (Night)dB(A)	
<b>Air Quality</b>	15/11/2016	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All monitored ambient air quality parameters are well within the stipulated limits of air quality.
		Particulate Matter < 10 micron	100 µg/m <sup>3</sup>	56.20 ug/m <sup>3</sup> Near VikashBhawanDistt. Almora	65.25 ug/m <sup>3</sup> Near VikashBhawanDistt. Almora	
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	29.33ug/m <sup>3</sup>	32.20 ug/m <sup>3</sup>	
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m <sup>3</sup>	7.22ug/m <sup>3</sup>	9.30 ug/m <sup>3</sup>	
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	16.43 ug/m <sup>3</sup>	20.10ug/m <sup>3</sup>	
		Carbon Monoxide (CO) mg/m <sup>3</sup>	02 mg/m <sup>3</sup> for 08 hrs	0.3 mg/m <sup>3</sup> for 08 hrs	0.42mg/m <sup>3</sup> for 08 hrs	
<b>Air Quality</b>	15/11/2016	SO <sub>2</sub> , NO <sub>x</sub> , CO , PM <sub>10</sub> and PM <sub>2.5</sub>	NAAQS Standards			All monitored ambient air quality parameters are well within the stipulated limits of air quality.
		Particulate Matter < 10 micron	100 µg/m <sup>3</sup>	61.81 ug/m <sup>3</sup> Near Construction site Almora	70.10 ug/m <sup>3</sup> Near Construction site Almora	
		Particulate Matter < 2.5 micron	60µg/m <sup>3</sup>	23.09ug/m <sup>3</sup>	34.65 ug/m <sup>3</sup>	
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m <sup>3</sup>	6.50ug/m <sup>3</sup>	7.12ug/m <sup>3</sup>	
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m <sup>3</sup>	19.22 ug/m <sup>3</sup>	18.75ug/m <sup>3</sup>	

Component	Periods of monitoring	Parameters/Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Carbon Monoxide (CO) mg/m <sup>3</sup>	02 mg/m <sup>3</sup> for 08 hrs	0.38 mg/m <sup>3</sup> for 08 hrs	0.22mg/m <sup>3</sup> for 08 hrs	
<b>Water Quality</b>	15/11/2016	<b>Drinking water (Tap Water)</b>	CPCB Standards for Surface water bodies and Drinking Water Standards for Potable water	1. pH-7.22 2. Colour <5 3. Turbidity –BDL 4. Odour –Agreeable 5. Taste –Agreeable 6. Total Hardness -345.0 7. Calcium as Ca- 86.55 8. Alkalinity -268.00 9. Chloride-70.40 10. Magnesium and Mg- 28.62 11. Total Dissolved Solids – 365.00 12. Iron -0.12 13. Copper<0.05 14. Total Coliform <2/100ml 15. E-Coli –Absent	1. pH-7.20 2. Colour <5 3. Turbidity –BDL 4. Odour –Agreeable 5. Taste –Agreeable 6. Total Hardness - 162.0 7. Calcium as Ca- 72.10 8. Alkalinity -132.00 9. Chloride-24.31 10. Magnesium and Mg- 17.10 11. Total Dissolved Solids – 305.10 12. Iron -0.11 13. Copper<0.05 14. Total Coliform <2/100ml 15. E-Coli –Absent	All parameters of drinking water are well within the limits of Drinking water specified in IS: 10500

Component	Periods of monitoring	Parameters/ Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
<b>UK/IDIPT/III/BHT/07</b>						
<b>Ambient Noise Level</b>	30-05-2015	Sound Level Leq. dB(A)	AAQ Standards for noise (Day time) for silence zones  55 dB(A)  For residential -- For commercial --65 dB(A) For Industrial -- 75 dB(A)	55.74 dB(A)		Contractor has been instructed and will be monitored in the coming quarter
<b>Ambient Air Quality</b>	30-05-2015	Concentration in Ambient Air, as per NAAQS	NAAQS for Ecologically sensitive area as per CPCB notification , 18 <sup>th</sup> Nov, 2009			Contractor has been instructed and Will be monitored in the coming quarter
		Particulate Matter < 10 micron	100	54 µg/m3		Contractor has been instructed and Will be monitored in the coming quarter
		Particulate Matter < 2.5 micron	60µg/m3	24 µg/m3		Contractor has been instructed and Will be monitored in the coming quarter
		Sulphur dioxide,(SO <sub>2</sub> )	80 µg/m3	18.4 µg/m3		
		Nitrogen dioxide(NO <sub>2</sub> )	80 µg/m3	14-18 µg/m3		
		Carbon Mono-oxide (CO)	2.0 mg/m3	0.03		
<b>Drinking Water</b>	30-05-2015	Colour (Hazen)	5 Max	<5		Contractor has been instructed and Will be monitored in
		Odour	Unobjectionable	Unobjectionable		
		Taste	Agreeable	Agreeable		

Component	Periods of monitoring	Parameters/ Pollutants	Standard	Base line status	Monitoring result during project Implementation	Remarks
		Turbidity(NT U)	5 Max	<1		the coming quarter
		pH	6.5 – 8.5	7.12		
		BOD <sub>5</sub> at 20°C (mg/l)	2	---		
		Total hardness mg/L	300 Max	94.2		
		Chloride mg/L	250 Max	24.9		
		Residual Free Chlorine mg/L	0.2	<0.2		
		Sulphats mg/L	200 max	11.9		
		Total Alkalinity mg/l	200	147		
		Flouride mg/L	1.0	0.24		
		Total dissolved solids mg/l	500	289		
		Iron (mg/l)	0.8	0.3		
		<b>BACTERIOLOGICAL TESTS</b>				
		Total Coli form Organisms 100 ml. at 37°C (MPN)	<10	<2		
		Feacal Coli form / 100ml	Absent	Absent		

## 10. Public Consultation Details

22. Meaningful Public Consultation has been done with the stakeholders and the Community, in all the project areas. Details of Public Consultation held in the Reporting period are given in Table 10. Consultation Photographs are provided in Annexure 1(ii).

Table 10(i): Public Consultation Meetings for Tranche III sub-projects Under DSC Dehradun

Kartikeya Swami Circuit Durgadhar	25/07/2016	Community Awareness about Plantation and its future result.	22	Villagers are very impressed and ready to give his full support and suggest some trees name which easily survived in village climate.
Kartikeya Swami Circuit Tungeshwar	26/07/2016	Community Awareness about Plantation and its feature good result to successful our plantation	11	
Kartikeya Swami Circuit Durgadhar	04/08/2016	Conducting the plantation event in Durgadhar and Tungeshwar village.	80	Villagers of Durgadhar and Tungeshwar have participated in Plantation event.
Rural Tourism Meeting at Bagori	25.09.2016	Communicate with Bagori villagers regarding the new construction work started in Bagori.	18	Villagers are optimistic about the project and ready to provide full support.
Rural Tourism Meeting at Mukhwa	26.09.2016	Meeting with village people and monitor the contractor work in Mukhwa village.	12	Community members are enthusiastic about the project
Kartikeya Swami Circuit Kartikeya swami temple	5/10/2016	Giving the presentation to DM Rudraprayag at DM office about the Kartikeya swami temple construction work in detail.	8	DM Rudraparyag appreciated the work and gave some useful suggestions.
Kartikeya Swami Circuit Kartikeya swami temple	5/10/2016	Meeting with DFO Rudraprayag	5	DFO was apprised of project progress
Kartikeya Swami Circuit Kartikeya swami temple	16.12.2016	Communicate with Kartikeya swami temple committee regarding the construction work and O&M.	18	Villagers and Kartikeya swami temple committee are very impressed and assure full support.
Rural Tourism Site visit at Kabiltha	17.12.2016	Kabiltha villager's interaction with the site contractor and discussion on work	11	Villagers were hopeful for the project benefits



Table 10(ii): Public Consultation Meetings for Tranche III sub-projects Under DSC Kotdwara

Sl. No.	Activity /Event at a glance	Date	Total Participant	Male	Female	Discussion/Suggestions
1	Haridwar DM Camp Office	05/07/2016	06	06	-	Consultations with DM.ADM Haridwar along with DSC, and UP Irrigation Official of regarding Implementation of Haridwar Sub-Project and necessary permission from UP Irrigation
2	DFO Office Kotdwara	18/07/2016	07	07	-	Consultations with DFO and UK Irrigation along with DSC regarding Rural Tourism Project at Kanvashram for forest related issues and forest clearance.
3.	UP Irrigation Office	19/07/2016	05	05	-	Consultation with SDO Up Irrigation along with DSC regarding construction of Pedestrian Route near Solani Park for ease of implementation.
4.	Uttarakhand Tube well Office Kotdwara	08/08/2016	05	05	-	Consultation with Assistant Engineer JalSansthan along with DSC regarding sinking of Tube well at Kanvashram for Lake Development and its estimate and any permission required for bore well.
5	HaridwarCollectorate	22/08/2016	10	10	-	Consultations with DM at collectorateHaridwar along with DSC, UP Irrigation and other Administrative Official of Haridwar regarding discussion over Implementation of Haridwar Sub-projectand tree cutting issues.
6.	HaridwarCollectorate	08/09/2016	11	11	-	Participant in Sub-Monitoring Committee meeting chaired by DM along with DSC to discussion over progress and work plan of Haridwar and Signage Sub-Project
7	Office of Minister at GoUK VidhanSabha Dehradun	16/09/2016	10	9	1	Participant in meeting called by minister along with DSC, DFO-Lansdowne, DTDO-Pauri, EE UK Irrigation Dugadda and Other UTDB Official and discussed the DPR documents of Rural Tourism.

Sl. No.	Activity /Event at a glance	Date	Total Participant	Male	Female	Discussion/Suggestions
8	Sendhikhal	24/09/2016	08	05	03	Awareness and discussion of Rural Tourism Sub-Project and Home Stay Policy of UTDB and collect the NOC from Gram Pradhan regarding implementation of Hardware Infrastructure at Sendhikhal. Views, comments and suggestions of stakeholders for the project
9	Jaiharikhal	24/09/2016	06	04	02	Visit to Jaiharikhal to give awareness and discussion of Rural Tourism Sub-Project and Home Stay Policy of UTDB and collect the NOC from Gram Pradhan regarding implementation of Hardware Infrastructure at Jaiharikhal.
10	Mavakot	15/11/2016	6		6	To give awareness and discussion of Rural Tourism Sub-Project and Home Stay Policy of UTDB and collect the NOC from Gram Pradhan regarding implementation of Hardware Infrastructure at Mavakot. The formation of women SHG and income generating activities also discussed.
11	Kalalghati	24/11/2016	14	14		To give awareness and discussion of Rural Tourism Sub-Project and Home Stay Policy of UTDB and collect the NOC from Gram Pradhan regarding implementation of Hardware Infrastructure at Mavakot.
12	Kanvashram	20/12/2016	6	6		The development of lake and associated facilities linked with future income generation process and finalisation of layout for toilet block and other facilities

Table 10(iii): Public Consultation Meetings for Tranche III sub-projects Under DSC Bhimtal

Activity /Event at a glance	Date	Discussion/Suggestions	Members present	Outcome
Meeting with Commissioner & LDA at Nainital	23-07-16	Discussion on the progress of Nainital sub project.	6	Commissioner was apprised of project progress
Meeting with Contractor at PIU, Bhimtal	03-09-16	Discussion on the progress of Nainital sub project.	8	Orientation of the contractor on safeguards and other project issues
CM Program at Sports Stadium, Pithoragarh	16-09-16	Awareness on Village Tourism and Inauguration of Tranche 3 projects in Pithoragarh by Chief Minister	1200	Community awareness regarding project components and outputs
Review Meeting by Commissioner at Nainital	03-10-16	Discussion on the progress of Nainital sub project and proposed car parking at Narayan Nagar, Nainital.	30	Commissioner was apprised of project progress in presence of other community members
Stakeholders discussion regarding Restoration and Adaptive Reuse of Pithoragarh Fort Phase II	27-07-2016	Discussions with the stakeholders	15	Shopkeeper were sensitized To shift their shops
Stakeholders discussion	Pithoragarh	28-09-2016	Discussion with the local masses & representative of contractor regarding present status of work under the sub project &labourers problems.	Public was sensitized about the parking problems
Review Meeting by District Administration, Pithoragarh	26-10-16	Discussion on the progress of Tranche 3 projects at Pithoragarh.	9	District Administration was apprised of project progress and some suggestions were given by the DM
Review Meeting by Secretary, Tourism at Pithoragarh	02-11-16	Discussion on the progress of Tranche 3 projects in Pithoragarh	10	On site discussion and meeting by Secretary Tourism, wherein project quality was reviewed

Review Meeting by District Administration, Pithoragarh	06-11-16	Discussion on the progress of Trench 3 projects at Pithoragarh.	15	District Administration was updated about project progress and review of suggestions given by the DM earlier
CM Program at Medical College, Haldwani	15-11-16	Inauguration of IDIPT sub projects (T- 3) and SwadeshDarshanYojana by CM.	1250	Community awareness regarding project components and outputs
Public Consultation Meeting at Takula, Nainital	22-12-16	Awareness on Project Work at Takula Gandhi Ashram.	35	Takula component was discussed in detail

**11. Any other environmental aspects, impacts observed during implementation which were not covered earlier**

23. No such impact observed during the reporting period

**12. Details of Complaints received from public and action taken thereof to resolve**

24. No complaint received during the reporting period.

**13. Follow up actions and Conclusions**

25. Site supervision is being regularly carried out to ensure that environmental impacts are being adequately mitigated and to ensure continuation of compliance with statutory regulations as required by laws and agreed upon in EMP. The contractors are being regularly guided and instructed to pay attention to environmental issues and adhere to the provisions of EMP. Training Programs for engineers, contractors, and project staff are being conducted and regular informal onsite orientation for the contractor's supervisory staff and site engineers on EMP will be continued.

**Annexure: 1: Photo Illustration**  
**Annexure: 1(i): Photo Illustration of Work Progress- DSC Dehradun**

Photographs of UK/ IDIPT-III/DDN/01 Development of Tourism Infrastructure in Kartikeya Swami Circuit (Durgadhar&Tungeshwar)	
	
Toilet under construction in Durgadhar	Display board of Grievance redress mechanism in Durgadhar
	
Retaining walls under construction inTungeshwar	Meeting with labourers in Durgadhar



**Photographs of UK/ IDIPT-III/DDN/01 Development of Tourism Infrastructure in Kartikeya Swami Circuit (Kartikeya Swami)**



Display board in Kartikeya Swami



Pathway at Kartikeya Swami

**Photographs of UK/ IDIPT-III/DDN/03: Conservation and Development of Rural Tourism Infrastructure in District Rudraprayag, Chamoli&Uttarkashi**



Interaction with site Engineer and other staff in Kabiltha




Path way under construction in Kabiltha

**Annexure: 1(ii): Photo Illustration of Work Progress- DSC Kotdwar**

Photographs of UK/ IDIPT-III/KOT/01 Creation of Pedestrian Route for Pilgrims and Tourists in Haridwar Project Site	
	
View of CC road at Solani Park	View of Guard wall along Pedestrian route
Photographs of UK/ IDIPT-III/KOT/02 Development of Tourism Infrastructure in Sem-Mukhem (Tehri) Project Site	
	
View of Under Construction Rest Shelter and Shed	



**Annexure: 1(iii): Photo Illustration of Work Progress- DSC Bhimtal**

Photographs of UK/ IDIPT-III/BHT/05 Development of Tourism Infrastructure in Banasur	
	
Retaining Wall	Pathway Development
Photographs of UK/IDIPT/III/BHT/03 Restoration and adaptive reuse of Almora Fort (Rani Mahal)1	
	
Building View	Ground Floor roof casting



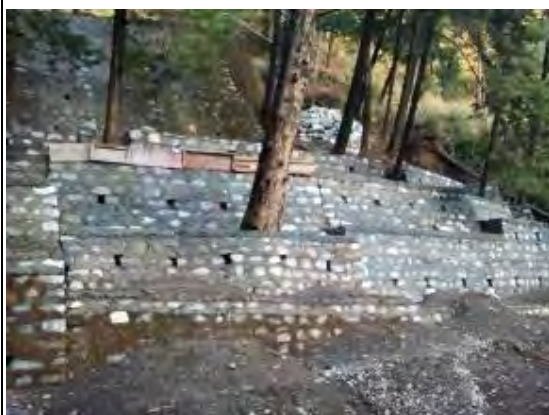
Photographs of UK/IDIPT/III/BHT/01 Conservation of Cultural Heritage and urban place making in Nainital Lot-1



Band Stand



Toilet



Retaining Wall



Wood Work in Library



Flooring Work at Band Stand



Breaking of old plaster Methodist church

## Annexure – 2: Environmental Monitoring Reports

(a) Environmental Monitoring Reports for Projects under PIU Dehradun



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Number:	ECON/STC/A/01	Report No:	ECON/A/1283
Name & Address of Party:	M/s. Shah Technical Consultants Private Limited, Room No 41, Uttarakhand Tourism Development Board, Prayatan Bhawan, Near ONGC Helipad, Gahricantt, Dehradun, Uttarakhand	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	30/09/2016
		Receipt Date:	23/09/2016
		Period of testing:	24-27/09/2016

**Sample Description:** AMBIENT AIR QUALITY MONITORING

**General Information:**

Sample Collected by	: Lab Representative
Sampling Location	: Near Vill.: & P.O.: Durgadhar, Block.: Augustmuni, Distt.: Rudraprayag
Instrument Used	: RDS with PM <sub>2.5</sub> Attachment
Instrument Code	: ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 22/09/2016 to 23/09/2016
Time of Monitoring	: 10:00 AM to 10:00 AM
Ambient Temperature (°C)	: Min. 11.00 Max. 32.00
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	56.10	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	26.42	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.65	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	19.32	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.26	CO Gas Analyser	4

\*NAAQS- National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II Sec. 3(i) 16.11.2009].

*[Signature]*

*[Stamp: ECON Laboratory and Consultancy, Dehradun]*

**Note:**

- The results listed refer only to the tested sample & applicable parameters
- Total liabilities of our lab will be restricted to the invoice amount only
- The sample will be destroyed after retention time unless otherwise specified
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in).

Contact No: +91-8534957815, 8126534344,





## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: **ECON/STC/AN/01** Report No: **ECON/AN/1284**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
**Room No 41, Uttarakhand Tourism Development Board,** Party Reference No: **By Mail**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,** Reporting Date: **30/09/2016**  
**Dehradun, Uttarakhand** Receipt Date: **23/09/2016**

#### Sample Description:

#### AMBIENT NOISE LEVEL MONITORING

##### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: & P.O.: Durgadhar, Block.: Augustmuni, Distt.: Rudrapur  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 22/09/2016 to 23/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 11.00, Max. 32.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	51.7	43.1	dB(A)
2.	$L_{min}$	CPCB Guideline/IS 9989	42.8	34.2	dB(A)
3.	CPCB Limit for Residential Area dB(A)		55.0	45.0	dB (A)



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@vsnl.in](mailto:econlab.consultancy@vsnl.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/A/01 Report No: ECON/A/1312  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No. 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun Uttarakhand, Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 14/10/2016  
Receipt Date: 10/10/2016  
Period of testing: 11-13/10/2016

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill. & P.O.: Harsil, Block: Bhatwari, Distt: Uttarkashi  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 08/10/2016 to 09/10/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 07:00 Max. 25.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	56.54	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	26.47	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.10	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.25	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.28	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i) 16.11.2009.



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1313  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No. 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun Uttarakhand, Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 14/10/2016  
Receipt Date: 10/10/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill. & P.O.: Harsil, Block., Bhatwari, Distt.: Uttarkashi  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 08/10/2016 to 09/10/2016  
Time of Monitoring : 10:00 AM to 6:00 AM  
Ambient Temperature ( $^{\circ}$ C) : Min. 07.00, Max. 25.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	52.4	44.9	dB(A)
2.	$L_{min}$	CPCB Guideline/IS 9989	39.2	35.0	dB(A)
3.	CPCB Limit for Residential Area dB(A)		55.0	45.0	dB (A)

*Signature*



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/DW/01** Report No: **ECON/DW/1314**

Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
Room No. 41, Uttarakhand Tourism Development Board, Party Reference No: **By Mail**  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt, Reporting Date: **14/10/2016**  
Dehradun, Uttarakhand, Receipt Date: **10/10/2016**  
Sample Description: **Drinking Water** Sampling Date: **09/10/2016**  
Sampling Location: Vill. & P.O.: Harshil Period of Testing: **11-13/10/2016**  
Block: Bhatwari, Distt.: Uttarkashi (U.K.) Sampling Type: **Grab**  
Sample Collected By: Lab Representative Preservation: **Refrigerated**  
Sampling & Analysis Protocol **IS 10500-2012, IS: 3025** Parameters Required: **As per Work Order**

## Test Results

S. No.	Parameters	Test Methods	Results	Units	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Max)
1.	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff.2012	7.56	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	< 5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff.2009	212.20	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff.2009	70.25	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff.2003	185.50	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1988 Reaff.2009	52.00	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff.2009	18.42	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff.2006	280.50	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff.2009	0.13	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

Note:

- The results listed refer only to the tested sample & applicable parameters
- Total liabilities of our lab will be restricted to the invoice amount only
- The sample will be destroyed after retention time unless otherwise specified
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law



Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/A/01** Report No: **ECON/A/1305**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
**Room No 41, Uttarakhand Tourism Development Board,** Party Reference No: **By Mail**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,** Reporting Date: **30/09/2016**  
**Dehradun, Uttarakhand** Receipt Date: **23/09/2016**  
Period of testing: **24-27/09/2016**

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: Pokhta, Kanak Chauri, Block Pokhri, Dist: Chamoli,  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 22/09/2016 to 23/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10.00 Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	61.20	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	31.30	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	8.99	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	15.09	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.35	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II- Sec:-3(i)] 16.11.2009.



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [ek@econlaboratory.com](mailto:ek@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: 491-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1306  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun Uttarakhand, Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 23/09/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Vill & P.O.: Pokhta, Block.: Pokhri, Distt.: Chamoli  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM//01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 22/09/2016 to 23/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10.00, Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>max</sub>	CPCB Guideline/IS 9989	51.6	41.8	dB(A)
2.	L <sub>min</sub>	CPCB Guideline/IS 9989	43.9	33.2	dB(A)
3.	CPCB limit for Residential Area dB(A)		55.0	45.0	dB (A)



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/A/01** Report No: **ECON/A/1287**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,**  
**Room No 41, Uttarakhand Tourism Development Board,**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,**  
**Dehradun, Uttarakhand** Format No: **5.10-F-01**  
Party Reference No: **By Mail**  
Reporting Date: **30/09/2016**  
Receipt Date: **23/09/2016**  
Period of testing: **24-27/09/2016**

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Kartik Swami Temple, Block Pokhri, Distt.: Chamoli,  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 21/09/2016 to 22/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10.00 Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	62.70	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	29.12	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	8.30	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	16.20	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.32	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)] 16.11.2009.

Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,







## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1288  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 23/09/2016

#### Sample Description: AMBIENT NOISE LEVEL MONITORING

##### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Kartik Swami Temple, Block.: Pokhri, Distt.: Chamoli  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 21/09/2016 to 22/09/2016  
Time of Monitoring : 10:00 AM to 6:00 AM  
Ambient Temperature ( $^{\circ}$ C) : Min. 10.00, Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	54.1	42.5	dB(A)
2.	$L_{Min}$	CPCB Guideline/IS 9989	39.6	34.2	dB(A)
3.	CPCB limit for Residential Area dB(A)		55.0	45.0	dB (A)



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/A/01** Report No: **ECON/A/1289**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,**  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand  
Format No: **5.10-F-01**  
Party Reference No: **By Mail**  
Reporting Date: **30/09/2016**  
Receipt Date: **23/09/2016**  
Period of testing: **24-27/09/2016**

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: Kaviha, P.O.: Kotma, Block.: Augustmuni, Distr.: Rudrapur  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/09/2016 to 20/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10:00 Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	57.20	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	26.00	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	8.10	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	16.14	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.28	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)] 16.11.2009.



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8554957815, 8126554344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/AN/01** Report No: **ECON/AN/1290**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
**Room No 41, Uttarakhand Tourism Development Board,** Party Reference No: **By Mail**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,** Reporting Date: **30/09/2016**  
**Dehradun, Uttarakhand** Receipt Date: **23/09/2016**

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: Kavita, P.O.: Kotma, Block.: Augustmuni, Dist.: Rudrapur  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/09/2016 to 20/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10.00, Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	49.5	42.8	dB (A)
2.	$L_{min}$	CPCB Guideline/IS 9989	40.2	32.0	dB (A)
3.	CPCB Limit for Residential Area dB(A)		55.0	45.0	dB (A)

- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/A/01** Report No: **ECON/A/1309**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
**Room No. 41, Uttarakhand Tourism Development Board,** Party Reference No: **By Mail**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,** Reporting Date: **14/10/2016**  
**Dehradun Uttarakhand,** Receipt Date: **10/10/2016**  
Period of testing: **11-13/10/2016**

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: Mukwa, P.O.: Harsil, Block.: Bhatwari, Distst.: Uttarkashi  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 09/10/2016 to 10/10/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 07.00 Max. 26.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	58.12	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	28.54	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.68	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.15	IS : 5182 (P-6), 1975 Reffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.26	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)] 16.11.2009.



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@vahoo.in](mailto:econlab.consultancy@vahoo.in)

Contact No: +91-8534957815, 8126534344,



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: ECON/STC/DW/01 Report No: ECON/DW/1311

Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No. 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand

Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 14/10/2016  
Receipt Date: 10/10/2016  
Sampling Date: 09/10/2016  
Period of Testing: 11-13/10/2016  
Sampling Type: Grab  
Preservation: Refrigerated  
Parameters Required: As per Work Order

Sample Description: Drinking Water  
Sampling Location: Vill.: Mukwa, P.O.: Harshil  
Block.: Bhatwari, Distt.: Uttarkashi (U.K.)

Sample Collected By: Lab Representative  
Sampling & Analysis Protocol IS 10500-2012, IS: 3025

### Test Results

S. No.	Parameters	Test Methods	Results	Units	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Max)
1.	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff.2012	7.40	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	< 5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff.2009	275.20	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff.2009	75.36	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff.2003	178.45	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1988 Reaff.2009	55.24	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff.2009	19.30	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff.2006	332.90	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff.2009	0.15	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1310  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No. 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 14/10/2016  
Receipt Date: 10/10/2016

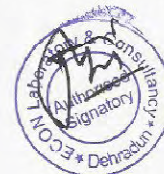
### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: Mukwa, P.O.: Harsil, Block: Bhatwari, Distt.: Uttarkashi  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 09/10/2016 to 10/10/2016  
Time of Monitoring : 10:00 AM to 6:00 AM  
Ambient Temperature ( $^{\circ}\text{C}$ ) : Min. 07.00, Max. 26.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{\max}$	CPCB Guideline/IS 9989	53.9	42.6	dB(A)
2.	$L_{\min}$	CPCB Guideline/IS 9989	40.5	32.4	dB(A)
3.	CPCB limit for Residential Area dB(A)		55.0	45.0	dB (A)



Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)  
Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/A/01

Report No: ECON/A/1291

Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun Uttarakhand,

Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 22/09/2016  
Period of testing: 24-27/09/2016

Sample Description: AMBIENT AIR QUALITY MONITORING

### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill & P.O.: Niti, Block.: Joshimath, Distt.: Chamoli,  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/09/2016 to 21/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 08:00 Max. 26.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	60.10	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	28.12	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.08	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.32	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.25	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (38)], [Part-II-Sec.-3(i)] 16.11.2009.

*D. K. Saxena*



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in).

Contact No: +91-8534957815, 8126534344.



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1292  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 22/09/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill & P.O.: Niti, Block.: Joshimath, Distt.: Chamoli  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM//01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/09/2016 to 21/09/2016  
Time of Monitoring : 10:00 AM to 6:00 AM  
Ambient Temperature (°C) : Min. 08.00, Max. 26.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>max</sub>	CPCB Guideline/IS 9989	52.5	42.5	dB(A)
2.	L <sub>Min</sub>	CPCB Guideline/IS 9989	40.4	33.2	dB(A)
3.	CPCB limit for Residential Area dB(A)		55.0	45.0	dB (A)



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/STC/S/01** Report No: **ECON/S/1293**

Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,**  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand

Sample Description: **Drinking Water (Tap Water)** Format No: **5.10-F-01**  
Sampling Location: **Vill.: & P.O.: Niti, Block: Joshimath** Party Reference No: **By Mail**  
Dist.: **Chamoli, Uttarakhand** Reporting Date: **30/09/2016**  
Sample Collected By: **Lab Representative** Receipt Date: **22/09/2016**  
Sampling & Analysis Protocol: **IS 10500-2012, IS: 3025** Sampling Date: **20/09/2016**  
Period of Testing: **21-24/09/2016**  
Preservation: **Refrigerated**  
Parameters Required: **As per Work Order**

## Test Results

S. No.	Parameters	Test Methods	Results	Units	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Max)
1.	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff.2012	7.25	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	< 5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff.2009	320.00	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff.2009	70.31	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff.2003	220.14	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1988 Reaff.2009	70.14	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff.2009	26.40	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff.2006	350.80	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff.2009	0.15	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

Note: 1. The results listed refer only to the tested sample & applicable parameters;  
2. Total liabilities of our lab will be restricted to the Invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in).

Contact No: +91-8534957815, 8126534344,



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: ECON/STC/A/01 Report No: ECON/A/1285  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt.  
Dehradun, Uttarakhand  
Format No: S.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 23/09/2016  
Period of testing: 24-27/09/2016

#### Sample Description:

#### AMBIENT AIR QUALITY MONITORING

##### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill.: & P.O.: Falasi, Block.: Augustmuni, Distt.: Rudraprayag  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 22/09/2016 to 23/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 11, 00 Max. 32.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	59.56	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	25.85	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	6.90	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	18.78	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/ m <sup>3</sup>	0.27	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)] 16.11.2009.



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [sk@econlaboratory.com](mailto:sk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126524344,





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/STC/AN/01 Report No: ECON/AN/1286  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 23/09/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Vill & P.O.: Falasi, Block.: Augustmuni, Dist.: Rudrapurayag  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 22/09/2016 to 23/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 11.00, Max. 32.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>max</sub>	CPCB Guideline/IS 9989	51.3	44.5	dB(A)
2.	L <sub>min</sub>	CPCB Guideline/IS 9989	41.6	32.9	dB(A)
3.	CPCB Limit for Residential Area dB(A)		55.0	45.0	dB (A)



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001|ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: ECON/STC/A/01 Report No: ECON/A/1307  
Name & Address of Party: M/s. Shah Technical Consultants Private Limited,  
Room No 41, Uttarakhand Tourism Development Board,  
Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,  
Dehradun, Uttarakhand  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 30/09/2016  
Receipt Date: 23/09/2016  
Period of testing: 24-27/09/2016

### Sample Description: AMBIENT AIR QUALITY MONITORING

General Information:  
Sample Collected by : Lab Representative  
Sampling Location : Near Chopta, Tungnath, Block.: Augustmuni, Distt.: Rudrapur  
Instrument Used : RDS with PM 2.5 Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/09/2016 to 20/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10, 00 Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	55.74	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	25.56	PM <sub>2.5</sub> Sampler (Gravimetric )	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	8.44	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.10	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.24	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII,[Rule 3 (38)],[Part-II-Sec.-3(i)]16.11.2009.



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,





## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: **ECON/STC/AN/01** Report No: **ECON/AN/1308**  
Name & Address of Party: **M/s. Shah Technical Consultants Private Limited,** Format No: **5.10-F-01**  
**Room No 41, Uttarakhand Tourism Development Board,** Party Reference No: **By Mail**  
**Prayatan Bhawan, Near ONGC Helipad, Gahri Cantt,** Reporting Date: **30/09/2016**  
**Dehradun, Uttarakhand** Receipt Date: **23/09/2016**

#### Sample Description: AMBIENT NOISE LEVEL MONITORING

##### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Chopta, Tungnath, Block.: Augustmuni, Distt.: Rudrapurayag  
Instrument Used : Sound Level Meter  
Instrument Code : ECON/SLM//01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/09/2016 to 19/09/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature ( $^{\circ}\text{C}$ ) : Min. 10.00, Max. 30.00  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No Any  
Sampling & Analysis Protocol : CPCB Guideline & IS 9989  
Parameters Required : As per Work Order

#### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	50.2	44.5	dB(A)
2.	$L_{min}$	CPCB Guideline/IS 9989	39.8	34.6	dB(A)
3.	CPCB limit for Residential Area dB(A)		55.0	45.0	dB (A)



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/AEC/A/01 Report No: ECON/A/1767  
Name & Address of Party: M/s. Aradhya Engineers and Construction, Pvt. Ltd., Rishikesh  
Format No.: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 15/11/2016  
Receipt Date: 10/11/2016  
Period of Testing: 11-13/11/2016

### Sample Description: AMBIENT AIR QUALITY MONITORING

#### General Information:

Sample Collected by : Lab Representative  
Sampling Location : Near Construction site, Durgadhar, Rudraprayag  
Instrument Used : RDS with PM 2.5 attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 07/11/2016 to 08/11/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature ( $^{\circ}\text{C}$ ) : 25  
Surrounding activity : Human Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter ( $\text{PM}_{10}$ ), $\mu\text{g}/\text{m}^3$	62.30	IS : 5182 (P-23), 2006	100
2.	Particulate Matter ( $\text{PM}_{2.5}$ ), $\mu\text{g}/\text{m}^3$	28.12	$\text{PM}_{2.5}$ Sampler (Gravimetric)	60
3.	Sulphur Dioxide ( $\text{SO}_2$ ), $\mu\text{g}/\text{m}^3$	7.10	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide ( $\text{NO}_2$ ), $\mu\text{g}/\text{m}^3$	18.40	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), $\text{mg}/\text{m}^3$	0.20	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II Sec.-3(i)] 16.11.2009.

- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yaheo.in](mailto:econlab.consultancy@yaheo.in)

Contact No: +91-8534957815, 8126534344,







# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/AEC/AN/01 Report No: ECON/AN/1768  
Name & Address of Party: M/s Aradhya Engineers and Construction, Pvt. Ltd., Rishikesh  
Format No.: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 15/11/2016  
Receipt Date: 10/11/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

Sample Collected by : Lab Representative  
Sampling Location : Near Construction site, Durgadhar, Rudraprayag  
Instrument Used : Sound Level Meter  
Instrument Code : SLM/01  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 07/11/2016 to 08/11/2016  
Time of Monitoring : 6:00 AM to 10:00 AM  
Ambient Temperature (°C) : 25  
Surrounding activity : Human Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Units
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>Max</sub>	CPCB Guideline/IS 9989	54.9	42.2	dB(A)
2.	L <sub>Min</sub>	CPCB Guideline/IS 9989	46.2	35.3	dB(A)
3.	Leq	CPCB Guideline/IS 9989	53.8	39.5	dB(A)
4.	CPCB Limit for Residential Area in dB(A)		55.0	45.0	dB (A)



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)

Contact No: +91-8534957815, 8126534344,



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/AEC/DW/01

Report No: ECON/DW/1769

Name & Address of Party: M/s Aradhya Engineers and Construction,  
Pvt. Ltd., Rishikesh

Format No.: 5.10-F-01

Party Reference No: By Mail

Reporting Date: 15/11/2016

Receipt Date: 10/11/2016

Sampling Date: 07/11/2016

Sample Description: Drinking Water (Tap Water)

Sampling Location: Near Durgadhar Temple

Dist.: Rudrapurayag

Period of Testing: 11-13/11/2016

Sampling Type: Grab

Preservation: Refrigerated

Parameters Required: As per Work Order

Sample Collected By: Lab Representative  
Sampling & Analysis Protocol IS 10500-2012, IS: 3025

## Test Results

S. No.	Parameters	Test Methods	Results	Units	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Lim the absence of Alternate Source (Max)
1.	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff.2012	7.15	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	< 5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff.2009	248.12	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff.2009	75.12	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff.2003	250.42	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1988 Reaff.2009	16.10	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff.2009	22.05	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff.2006	340.0	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff.2009	0.08	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)



Contact No: +91-8534957815, 8126534344,



(b) Environmental Monitoring Reports for Projects under PIU Kotdwar

Environmental Monitoring Report for Haridwar Sub Project

(ISO Certified & NABL Accredited Lab.)



**M. E. TESTING LABORATORY**

C-31, Urmila Marg, Hanuman Nagar, Khali Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj) INDIA

Branch - Harbarswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172  
Mobile: +91 7535000490, 491 | Email: metiddn@gmail.com | metestinglaboratoryddn@gmail.com

**TEST REPORT**

**Description of Sample:** Ambient Air Monitoring  
**Letter Dated:** 10/11/2016  
**Package No.:** UK/DIPT/III/KOT/01  
**N.O.W.:** Creation of Pedestrian Route for Pilgrims and Tourist in Haridwar, Uttarakhand.  
**Location:** Saloni Park Roorkee.  
**Environmental Conditions:** N.A.  
**Sampling Period:** Twenty Four Hours from 12-13/11/2016  
**Issued to:**  
S.S. Infratech,  
New Mandi Iqbalpur Road,  
Jhabera, Haridwar (UK)


**Report No.:** METL/DDN/274(05)/2016  
**Date of Report:** 18/11/2016  
**Date of Testing:** 14-17/11/2016  
**Date of Receipt:** 14/11/2016

**TEST CERTIFICATE OF AIR MONITORING**


S. No.	Parameters	Test-Value	Requirement as per National Ambient Air Quality Standards CPCB	
			Industrial, Rural & other area	Sensitive Area
1.	Particulate Matter (size < 10µm), µg/m <sup>3</sup> (24 hrs)	82.3	100 Max.	100 Max.
2.	Particulate Matter (size < 2.5 µm), µg/m <sup>3</sup> (24 hrs)	56.7	60 Max.	60 Max.
3.	Sulphur dioxide, µg/m <sup>3</sup> (24 hrs.)	18.5	80 Max.	80 Max.
4.	Oxides of Nitrogen, µg/m <sup>3</sup> (24 hrs.)	14.2	80 Max.	80 Max.
5.	Carbon Mono Oxide, µg/m <sup>3</sup>	N.D	02*, 04*	02*, 04*

**Protocol Used:** IS: 5182 (P-2, 3 & 23), CPCB Guidelines.  
**Note:** ND stands for Non-Detectable.  
**Note:** \* Maximum limits for 8 hourly monitoring, # Maximum limits for 1 hourly monitoring.

\*\*\*\*\*End of Report\*\*\*\*\*



(P.S.)



Checked & Issued by  
Authorised Signatory

1. The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.  
2. Total liability of our Lab. is limited to the invoiced amount.  
3. Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.  
4. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(47)



(ISO Certified & NABL Accredited Lab.)



ISO 9001:2008 Certified Testing Lab.  
www.metestinglaboratory.com

## M. E. TESTING LABORATORY

C-31, Urmila Marg, Hanuman Nagar, Khatai Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj.) INDIA

Branch - Harbaniswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172

Mobile: +91 7535000490, 491 | Email: metiddn@gmail.com | metestinglaboratoryddn@gmail.com

### TEST REPORT

Description of Sample: Noise Monitoring  
Letter Dated: 10/11/2016  
Package No.: UK/IDIPT/III/KOT/01  
N.O.W.: Creation of Pedestrian Route for Pilgrims and Tourist in  
Haridwar, Uttarakhand.  
Location: Saloni Park Roorkee.  
Environmental Conditions: N.A.  
Sampling Period: 12/11/2016  
Issued to:

S.S. Infratech,  
New Mandi Iqbalpur Road,  
Jhabera, Haridwar (UK)

Report No.: METL/DDN/271(03)/2016

Date of Report: 15/11/2016

Date of Receipt: 14/11/2016

### TEST CERTIFICATE OF NOISE MONITORING

Parameter			Test-Value	Ambient Air Quality Standards in respect of Noise Limits in dB(A) Leq, (the Noise Pollution Regulation & Control) RULES-2000			
				Industrial	Commercial	Residential	Silence
Noise Level (Day) dB (A)	Leq	Day	64.0	75	65	55	50
	L <sub>max</sub>	Day	65.5	--	--	--	--
	L <sub>min</sub>	Day	62.8	--	--	--	--

Protocol Used: IS: 9989-1981

\*\*\*\*\*End of Report\*\*\*\*\*



Checked & Issued by  
Authorised Signatory

1. The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
2. Total liability of our Lab. is limited to the invoiced amount.
3. Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.
4. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(48)



ISO 9001:2008 Certified Testing Lab.  
www.metestinglaboratory.com

# M. E. TESTING LABORATORY

C-31, Urmila Marg, Hanuman Nagar, Khati Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj.) INDIA

Branch - Harbanswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172

Mobile: +91 7535000490, 491 | Email: metiddn@gmail.com | metestinglaboratoryddn@gmail.com

## TEST REPORT

Description of Sample: Drinking Water  
Letter Dated: 10/11/2016  
Package No.: UK/IDPT/III/KOT/01  
N.O.W.: Creation of Pedestrian Route for Pilgrims and Tourist in  
Haridwar, Uttarakhand.  
Location: Saloni Park Roorkee.

Report No.: METL/DDN/276(04)/2016  
Date of Report: 21/11/2016  
Date of Testing: 14-19/11/2016  
Date of Receipt: 14/11/2016

Issued to:

S.S. Infratech,  
New Mandi Iqbalpur Road,  
Jhabern, Haridwar (UK)

### Requirement as per IS: 10500-2012(Drinking Water)

S. No.	Characteristics	Test -Value	Acceptable Limit	Permissible Limit in absence of Alternate Source	Method of Test
1	Colour, Hazen unit. Max.	≤5	5	15	IS-3025(P-4)-1983
2	Odour	Agreeable	Agreeable	Agreeable	IS-3025(P-5)-1983
3	Turbidity, NTU. Max.	Nil	1	5	IS-3025(P-10)-1984
4	pH Value	7.3	6.5 – 8.5	No Relaxation	IS-3025(P-11)-1983
5	Total Hardness, (as CaCO <sub>3</sub> ), mg/l Max.	174	200	600	APHA-22 <sup>nd</sup> Ed/2012
6	Iron (as Fe), mg/l Max.	Nil	0.3	No Relaxation	IS-3025(P-53)-2012
7	Chloride (as Cl), mg/l Max.	75	250	1000	APHA-22 <sup>nd</sup> Ed/2012
8	Fluoride (as F), mg/l Max.	0.80	1.0	1.5	APHA-22 <sup>nd</sup> Ed/2012
9	Total Dissolved Solids mg/l Max.	381	500	2000	IS-3025(P-16)-1984

### Bacteriological Test

S. No.	Characteristics	Test -Value	Acceptable Limit	Method of Test
1	Total Coliform Organisms (MPN)	Not Detected	Shall not be detectable in 100ml, sample	IS-1622-1981
2	E Coli	Not Detected	Shall not be detectable in 100ml, sample	IS-1622-1981

Remark: With respect to the above test, Sample water comply IS-10500-2012.

\*\*\*\*\*End of Report\*\*\*\*\*



Checked & Issued by  
Authorised Signatory

- The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
- Total liability of our Lab. is limited to the invoiced amount.
- Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.
- This report is not to be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(49)



(c) Environmental Monitoring Report for SemMukhem Sub Project



# M. E. TESTING LABORATORY

C-31, Urmila Marg, Hanuman Nagar, Khatai Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj.) INDIA

Branch - Harbanswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172

Mobile: +91 7535000490, 491 | Email: metddn@gmail.com | metestinglaboratoryddn@gmail.com

## TEST REPORT

Description of Sample: Drinking Water

Letter Dated: 10/11/2016

Package No.: UKIDPT/KOT-02/CA/02/T-3 2015-16

Site: GMVN, Sem Mukhem

Report No.: METL/DDN/277(02)/2016

Date of Report: 22/11/2016

Date of Testing: 16-21/11/2016

Date of Receipt: 16/11/2016

Issued To:

M/s Mangalam Engineers & Construction Company,  
34, Kaiser Ganj Mandi, Meerut (UP).

### Requirement as per IS: 10500-2012(Drinking Water)

S. No.	Characteristics	Test -Value	Acceptable Limit	Permissible Limit in absence of Alternate Source	Method of Test
1	Colour, Hazen unit. Max.	≤5	5	15	IS-3025(P-4)-1983
2	Odour	Agreeable	Agreeable	Agreeable	IS-3025(P-5)-1983
3	Turbidity, NTU. Max.	Nil	1	5	IS-3025(P-10)-1984
4	pH Value	7.3	6.5 - 8.5	No Relaxation	IS-3025(P-11)-1983
5	Total Hardness, (as CaCO <sub>3</sub> ), mg/l Max.	174	200	600	APHA-22 <sup>nd</sup> Ed/2012
6	Iron (as Fe), mg/l Max.	Nil	0.3	No Relaxation	IS-3025(P-53)-2012
7	Chloride (as Cl), mg/l Max.	76	250	1000	APHA-22 <sup>nd</sup> Ed/2012
8	Fluoride (as F), mg/l Max.	0.77	1.0	1.5	APHA-22 <sup>nd</sup> Ed/2012
9	Total Dissolved Solids mg/l Max.	377	500	2000	IS-3025(P-16)-1984

### Bacteriological Test

S. No.	Characteristics	Test -Value	Acceptable Limit	Method of Test
1	Total Coliform Organisms (MPN)	Not Detected	Shall not be detectable in 100ml, sample	IS-1622-1981
2	E Coli	Not Detected	Shall not be detectable in 100ml, sample	IS-1622-1981

Remark: With respect to the above test, Sample water comply IS-10500-2012.

\*\*\*\*\*End of Report\*\*\*\*\*



Checked & Issued by  
Authorised Signatory

1. The result stated refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
2. Total liability of our Lab. is limited to the involved amount.
3. Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.
4. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(ISO Certified & NABL Accredited Lab.)



© 9001:2008 Certified Testing Lab  
www.metestinglaboratory.com

## M. E. TESTING LABORATORY

C-31, Urmila Marg, Hanuman Nagar, Khati Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj.) INDIA

Branch - Harbanswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172

Mobile: +91 7535000490, 491 | Email: metiddn@gmail.com | metestinglaboratoryddn@gmail.com

### TEST REPORT

Description of Sample: Ambient Air Monitoring

Letter Dated: 10/11/2016

Package No.: UKIDPT/KOT-02/CA/02/ T-3 2015-16

Site: GMVN, Sem Mukhem

Environmental Conditions: N.A.

Sampling Period: Twenty Four Hours form 14-15/11/2016

Issued To:

Report No.: METL/DDN/276(01)/2016

Date of Report: 21/11/2016

Date of Testing: 16-19/11/2016

Date of Receipt: 16/11/2016

M/s Mangalam Engineers & Construction Company,  
34, Kaiser Ganj Mandi, Meerut (UP).

### TEST CERTIFICATE OF AIR MONITORING

S. No.	Parameters	Test-Value	Requirement as per National Ambient Air Quality Standards CPCB	
			Industrial, Rural & other area	Sensitive Area
1.	Particulate Matter (size < 10µm), µg/m <sup>3</sup> (24 hrs)	74.1	100 Max.	100 Max.
2.	Particulate Matter (size < 2.5 µm), µg/m <sup>3</sup> (24 hrs)	52.5	60 Max.	60 Max.
3.	Sulphur Dioxide), µg/m <sup>3</sup> (24 hrs.)	15.2	80 Max.	80 Max.
4.	Oxides of Nitrogen, µg/m <sup>3</sup> (24 hrs.)	11.4	80 Max.	80 Max.
5.	Carbon Mono Oxide), µg/m <sup>3</sup>	N.D	02 <sup>a</sup> , 04 <sup>b</sup>	02 <sup>a</sup> , 04 <sup>b</sup>

Protocol Used: IS: 5182 (P-2, 3 & 23), CPCB Guidelines.

Note: ND stands for Non-Detectable.

Note: <sup>a</sup> Maximum limits for 8 hourly monitoring, <sup>b</sup> Maximum limits for 1 hourly monitoring.

\*\*\*\*\*End of Report\*\*\*\*\*



Checked & Issued by  
Authorised Signatory

1. The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
2. Total liability of our Lab. is limited to the invoiced amount.
3. Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.
4. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(ISO Certified & NABL Accredited Lab.)



## M. E. TESTING LABORATORY

C-31, Urmila Marg, Hanuman Nagar, Khali Pura Road, (Near Jodhpur Mishan Bhandar) Jaipur (Raj.) INDIA

0 9001:2008 Certified Testing Lab  
www.metestinglaboratory.com

Branch - Harbanswala, Shimla By-Pass, Telpur Chowk, Dehradun (U.K.) India | Phone: 0135 6500172  
Mobile: +91 7535000490, 491 | Email: metiddn@gmail.com | metestinglaboratoryddn@gmail.com

### TEST REPORT

Description of Sample: Noise Monitoring  
Letter Dated: 10/11/2016  
Package No.: UKIDPT/KOT-02/CA/02/T-3 2015-16  
Site: GMVN, Sem Mukhem  
Environmental Conditions: N.A.  
Sampling Period: 14/11/2016  
Issued To:

Report No.: METL/DDN/273(01)/2016

Date of Report: 17/11/2016

Date of Receipt: 16/11/2016

M/s Mangalam Engineers & Construction Company,  
34, Kaiser Ganj Mandi, Meerut (UP).

### TEST CERTIFICATE OF NOISE MONITORING

Parameter			Test-Value	Ambient Air Quality Standards in respect of Noise Limits in dB(A) Leq, (the Noise Pollution Regulation & Control) RULES-2000			
				Industrial	Commercial	Residential	Silence
Noise Level (Day)	Leq	Day	57.0	75	65	55	50
dB (A)	L <sub>max</sub>	Day	58.6	--	--	--	--
	L <sub>min</sub>	Day	56.3	--	--	--	--

Protocol Used: IS: 9989-1981

\*\*\*\*\*End of Report\*\*\*\*\*

Checked & Issued by  
Authorised Signatory

1. The result listed refer only to the tested samples and applicable parameters endorsement of product is neither inferred nor implied.
2. Total liability of our Lab, is limited to the invoiced amount.
3. Samples will be destroyed after 10 Days/30 Days from the date of issue of test report.
4. This report is not be reproduced wholly or in part and cannot be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.

(a) Environmental Monitoring Reports for Projects under PIU Bhimtal





Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: ECON/SPL/AN/01 Report No: ECON/2016/AN/1507  
Name & Address of Party: M/s. Simplex Projects Limited.  
12/1 Nellie Sangupta Sarani  
Kolkata-700087  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 15/11/2016  
Receipt Date: 10/11/2016

### Sample Description: AMBIENT NOISE LEVEL MONITORING

#### General Information:

Name of Project: Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)  
Sample Collected by: Lab Representative  
Sampling Location: Near Construction, Almora Fort, Distt. Almora  
Instrument Used: Sound Level Meter  
Instrument Code: ECON/SLM/01  
Instrument Calibration Status: Calibrated  
Meteorological condition during monitoring: Clear Sky  
Date of Monitoring: 05/11/2016 to 06/11/2016  
Time of Monitoring: 6:00 AM to 6:00 AM  
Ambient Temperature (°C): Min. 8.00, Max. 22.00  
Surrounding activity: Human Activities & Vehicular Activities  
Scope of Monitoring: Regulatory Requirement  
Control measure if any: No Any  
Sampling & Analysis Protocol: CPCB Guideline & IS 9989  
Parameters Required: As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1	$L_{\text{eq}}$	CPCB Guideline/IS 9989	46.1	37.2	dB(A)
2	$L_{\text{eq}}$	CPCB Guideline/IS 9989	35.2	31.2	dB(A)
3	$L_{\text{eq}}$	CPCB Guideline/IS 9989	43.4	34.4	dB(A)
4	CPCB limit for Residential Zone dB(A)		55.0	45.0	dB (A)

*(Signature)*



Note: 1. The results listed refer only to the tested sample & applicable parameters.  
2. Total liabilities of our lab will be restricted to the invoice amount only.  
3. The sample will be destroyed after retention time unless otherwise specified.  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law.

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [info@econlaboratory.com](mailto:info@econlaboratory.com), [econlab.consultancy@vsnl.co.in](mailto:econlab.consultancy@vsnl.co.in)

Contact No: +91-8534957835, 8126534944



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)



## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number:	ECON/SPL/AN/02	Report No:	ECON/2016/AN/1508
Name & Address of Party:	M/s. Simplex Projects Limited. 12/1 Nellie Sangupta Sarani Kolkatta-700087	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information

Name of Project	: Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)
Sample Collected by	: Lab Representative
Sampling Location	: Near Back Side of Almora Fort, Dist.: Almora
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/02
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 05/11/2016 to 06/11/2016
Time of Monitoring	: 6:00 AM to 6:00 AM
Ambient Temperature ( $^{\circ}$ C)	: Min. 8.00, Max. 22.0
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No Any
Sampling & Analysis Protocol	: CPCB Guideline & IS 9989
Parameters Required	: As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{Max}$	CPCB Guideline/IS 9989	48.2	40.3	dB(A)
2.	$L_{Min}$	CPCB Guideline/IS 9989	32.1	32.8	dB(A)
3.	$L_{eq}$	CPCB Guideline/IS 9989	43.4	38.1	dB(A)
4.	CPCB Limit for Residential Zone dB(A)		55.0	45.0	dB (A)



- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number:	ECON/SPL/W/01	Report No:	ECON/2016/DW/1508
Name & Address of Party:	M/s. Simplex Projects Limited, 12/1 Nellie Sengupta Sarani, Kolkata-700087	Format No:	5,10-F-01
Project Name:	Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)	Party Reference No:	By Mail
Sample Description:	Drinking Water (Tap Water)	Reporting Date:	15/11/2016
Sampling Location:	Near Almora Fort	Receipt Date:	10/11/2016
	Dist.: Almora, Uttarakhand.	Sampling Date:	05/11/2016
Sample Collected By:	Lab Representative	Period of Testing:	11-14/11/2016
Sampling & Analysis Protocol:	IS 10500-2012, IS: 3025	Sampling Type:	Grab
		Preservation:	Refrigerated
		Parameters Required:	As per Work Order

## Test Results

S. No.	Parameters	Test Methods	Results	Unit	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Max)
1	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff 2012	7.20	-	6.5 to 8.5	No Relaxation
2	Colour	IS 3025 (P-45): 1983	<5	Hazen	5	15
3	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff 2009	162.00	mg/l	200	600
7	Calcium as Ca	IS 3025 (P-40): 1991 Reaff 2009	72.10	mg/l	75	200
8	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff 2009	132.00	mg/l	200	600
9	Chloride as Cl <sup>-</sup>	IS 3025 (P-32): 1988 Reaff 2009	24.31	mg/l	250	1000
10	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff 2009	17.10	mg/l	30	100
11	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2009	305.10	mg/l	500	2000
12	Iron as Fe	IS 3025 (P-53): 2005 Reaff 2009	0.11	mg/l	0.3	No Relaxation
13	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14	Total Coliforms	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law







## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number:	ECON/SPL/S/01	Report No:	ECON/2016/SS/1510
Name & Address of Party:	M/s. Simplex Projects Limited. 12/1 Nellie Sangupta Sarani Kolkatta-700087	Format No:	5.10-F-01
Project Name	Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)	Party Reference No:	By Mail
Sample Description:	Soil Sample	Reporting Date:	15/11/2016
Sampling Location:	Near Almora Fort (Rani Mahal) Dist. Almora, Uttarakhand	Receipt Date:	10/11/2016
Sample Collected By:	Lab Representative	Sampling Date:	05/11/2016
Sampling & Analysis Protocol:	IS 2720& Ministry of Agriculture & Cooperation, G.O.I. Manual-2011	Period of Testing:	11-14/11/2016
		Sampling Type:	Composite

### Test Results

S. No.	Parameters	Protocol Used	Results	Unit
1.	pH @ 25 °C	SOP based on Ministry of Agriculture & Cooperation, G.O.I. Manual-2011	7.21	--
2.	Conductivity	-----DO-----	0.30	mS/cm
3.	Chloride as Cl	-----DO-----	42.25	mg/kg
4.	Potassium as K	-----DO-----	120.05	kg/hect.
5.	Organic Matter	-----DO-----	0.42	%
6.	Nitrogen as N	-----DO-----	4.25	%
7.	Sodium as Na	-----DO-----	110.41	mg/kg
8.	Phosphate	-----DO-----	18.20	kg/hect
9.	Sulphate as SO <sub>4</sub>	-----DO-----	14.14	mg/kg
10.	Sand	-----DO-----	36.00	%
11.	Silt	-----DO-----	32.00	%
12.	Clay	-----DO-----	32.00	%
13.	Water Holding Capacity	-----DO-----	25.40	%
14.	Porosity	-----DO-----	22.20	%

Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlabortory.com](http://www.econlabortory.com) email: [info@econlabortory.com](mailto:info@econlabortory.com) [conslab@econlabortory.com](mailto:conslab@econlabortory.com)





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: ECON/SPL/A/01 Report No: ECON/2016/A/1505  
Name & Address of Party: M/s. Simplex Projects Limited  
12/1-Nellie Sangupta Sarani  
Kolkata-700087  
Format No: 5.10-F-01  
Party Reference No: By Mail  
Reporting Date: 15/11/2016  
Receipt Date: 10/11/2016  
Period of testing: 11-14/11/2016

Sample Description: AMBIENT AIR QUALITY MONITORING

### General Information

Name of Project: Restoration and Adaptive Reuse of Almora Fort (Rani Mahal)  
Sample Collected by: Lab Representative  
Sampling Location: Near Construction Site, Vikash Bhawan, Distt : Almora  
Instrument Used: RDS with PM<sub>2.5</sub> Attachment  
Instrument Code: ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status: Calibrated  
Meteorological condition during monitoring: Clear Sky  
Date of Monitoring: 05/11/2016 to 06/11/2016  
Time of Monitoring: 10:00 AM to 10:00 AM  
Ambient Temperature (°C): Min. 8.00, Max. 22.0  
Surrounding activity: Human Activities & Vehicular Activities  
Scope of Monitoring: Regulatory Requirement  
Control measure if any: No  
Sampling & Analysis Protocol: IS-5182  
Parameters Required: As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	65.25	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	32.20	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	9.30	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	20.10	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.42	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)] 16.11.2009.

Note:

1. The results listed refer only to the tested sample & applicable parameters.
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/SPL/A/01** Report No: **ECON/2016/A/1511**  
Name & Address of Party: **M/s. Simplex Projects Limited** Format No: **5,10-F-01**  
**12/1-Nellie Sangupta Sarani** Party Reference No: **By Mail**  
**Kolkata-700087** Reporting Date: **15/11/2016**  
Receipt Date: **10/11/2016**  
Period of testing: **10-14/11/2016**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Name of Project : Restoration and Adaptive Reuse of Banasur Fort (Champawat)  
Sample Collected by : Lab Representative  
Sampling Location : Near Construction Site, Distt. Champawat  
Instrument Used : RDS with PM<sub>2.5</sub> Attachment  
Instrument Code : ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status : Calibrated  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 03/11/2016 to 04/11/2016  
Time of Monitoring : 10:00 AM to 10:00 AM  
Ambient Temperature (°C) : Min. 10.0, Max. 20.0  
Surrounding activity : Human Activities & Vehicular Activities  
Scope of Monitoring : Regulatory Requirement  
Control measure if any : No  
Sampling & Analysis Protocol : IS-5182  
Parameters Required : As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	60.10	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	34.10	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.10	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	19.30	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.20	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II Sec.-3(i)] 16.11.2009.

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law



Web: [www.econlabharidwar.com](http://www.econlabharidwar.com) email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in).





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/SPL/A/02** Report No: **ECON/2016/A/1512**  
Name & Address of Party: **M/s. Simplex Projects Limited** Format No: **5.10-F-01**  
**12/1-Nellie Sengupta Sarani** Party Reference No: **By Mail**  
**Kolkata-700087** Reporting Date: **15/11/2016**  
Receipt Date: **10/11/2016**  
Period of testing: **10-14/11/2016**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information

Name of Project: Restoration and Adaptive Reuse of Banasur Fort (Champawat)  
Sample Collected by: Lab Representative  
Sampling Location: Near Back Side, Distt. Champawat  
Instrument Used: RDS with PM<sub>2.5</sub> Attachment  
Instrument Code: ECON/EQP/02, ECON/LOP/02A & ECON/EQP/02B  
Instrument Calibration Status: Calibrated  
Meteorological condition during monitoring: Clear Sky  
Date of Monitoring: 03/11/2016 to 04/11/2016  
Time of Monitoring: 10:20 AM to 10:20 AM  
Ambient Temperature (°C): Min. 10.0, Max. 20.0  
Surrounding activity: Human Activities & Vehicular Activities  
Scope of Monitoring: Regulatory Requirement  
Control measure if any: No  
Sampling & Analysis Protocol: IS-5182  
Parameters Required: As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	62.10	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	30.15	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.18	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.10	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.22	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, (Rule 3 (3B)), (Part-II Sec. 3(i)) 16.11.2009.

### Note:

- The results listed refer only to the tested sample & applicable parameters
- Total liabilities of our lab will be restricted to the invoice amount only
- The sample will be destroyed after retention time unless otherwise specified
- This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law



Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [info@econlaboratory.com](mailto:info@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number:	ECON/SPL/AN/01	Report No:	ECON/2016/AN/1513
Name & Address of Party:	M/s. Simplex Projects Limited, 12/1 Nellie Sangupta Sarani Kolkata-700087.	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information:

Name of Project	: Restoration and Adaptive Reuse of Banasur Fort (Champawat)
Sample Collected by	: Lab Representative
Sampling Location	: Near Construction Site, Distt. Champawat
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 02/02/2016 to 03/02/2016
Time of Monitoring	: 6:00 AM to 6:00 AM
Ambient Temperature ( $^{\circ}$ C)	: Min. 10.00, Max. 20.00
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No Any
Sampling & Analysis Protocol	: CPCB Guideline & IS 9989
Parameters Required	: As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{Max}$	CPCB Guideline/IS 9989	50.8	42.2	dB(A)
2.	$L_{Min}$	CPCB Guideline/IS 9989	40.3	34.5	dB(A)
3.	$L_{eq}$	CPCB Guideline/IS 9989	43.2	35.2	dB(A)
4.	CPCB limit for Residential Zone	dB(A)	55.0	45.0	dB (A)

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law



Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number:	ECON/SPL/AN/02	Report No:	ECON/2016/A/1514
Name & Address of Party:	M/s. Simplex Projects Limited, 12/1 Nellie Sangupta Sarani Kolkata-700087.	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information

Name of Project	: Restoration and Adaptive Rense of Banasur Fort (Champawat)
Sample Collected by	: Lab Representative
Sampling Location	: Near Construction Site, Distr.: Champawat
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/02
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 03/11/2016 to 04/11/2016
Time of Monitoring	: 6:00 AM to 6:00 AM
Ambient Temperature (°C)	: Min. 10.00, Max. 20.00
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No Any
Sampling & Analysis Protocol	: CPCB Guideline & IS 9989
Parameters Required	: As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>Max</sub>	CPCB Guideline/IS 9989	51.4	41.2	dB(A)
2.	L <sub>Min</sub>	CPCB Guideline/IS 9989	40.5	35.5	dB(A)
3.	L <sub>eq</sub>	CPCB Guideline/IS 9989	44.4	38.4	dB(A)
4.	CPCB limit for Residential Zone dB(A)		55.0	45.0	dB (A)



Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlab.com](http://www.econlab.com) Email: [info@econlab.com](mailto:info@econlab.com) Phone: 0522-2611111



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001) ISO 14001 Certified | NABL Accredited Laboratory

## Test Certificate

Sample Number:	ECON/SPL/W/01	Report No:	ECON/2016/DW/151
Name & Address of Party:	M/s. Simplex Projects Limited. 12/1 Nellie Sangupta Sarani Kolkatta-700087	Format No:	5.10-F-01
Project Name :	Restoration and Adaptive Reuse of Banasur Fort (Champurawat)	Party Reference No:	By Mail
Sample Description :	Drinking Water (Tap Water)	Reporting Date:	15/11/2016
Sampling Location:	Near Construction Site, Dist. Champawat	Receipt Date:	10/11/2016
Sample Collected By:	Lab Representative	Sampling Date:	04/11/2016
Sampling & Analysis Protocol:	IS 10500-2012, IS: 3025	Period of Testing:	11-14/11/2016
		Sampling Type:	Grab
		Preservation:	Refrigerated
		Parameters Required:	As per Work Order

## Test Results

S. No.	Parameters	Test Methods	Results	Unit	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Max)
1.	pH (at 25°C)	IS 3025 (P-11): 1984 Reaff. 2012	7.2	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	<5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	IS 3025 (P-21): 1983 Reaff. 2009	189.00	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff. 2009	70.20	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	IS 3025 (P-23): 1983 Reaff. 2003	138.00	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1988 Reaff. 2009	20.10	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff. 2009	18.10	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff. 2006	325.24	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff. 2009	0.10	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law





## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001| ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number:	ECON/SPL/S/01	Report No:	ECON/2016/SS/1516
Name & Address of Party:	M/s. Simplex Projects Limited. 12/1 Nellie Sangupta Sarani Kolkatta-700087	Format No:	5.10-F-01
Project Name :	Restoration and Adaptive Reuse of Banasur Fort (Champawat)	Party Reference No:	By Mail
Sample Description:	Soil Sample	Reporting Date:	15/11/2016
Sampling Location:	Near Construction Site, Distt: Champawat	Receipt Date:	10/11/2016
Sample Collected By:	Lab Representative	Sampling Date:	04/11/2016
Sampling & Analysis Protocol:	IS 2720 & Ministry of Agriculture & Cooperation, G.O.I. Manual-2011	Period of Testing:	10-14/11/2016
		Sampling Type:	Composite

### Test Results

S. No.	Parameters	Protocol Used	Results	Unit
1.	pH @ 25 °C	SOP based on Ministry of Agriculture & Cooperation, G.O.I. Manual-2011	7.14	--
2.	Conductivity	-----DO-----	0.22	mS/cm
3.	Chloride as Cl	-----DO-----	41.25	mg/kg
4.	Potassium as K	-----DO-----	125.00	kg/hect.
5.	Organic Matter	-----DO-----	0.42	%
6.	Nitrogen as N	-----DO-----	4.12	%
7.	Sodium as Na	-----DO-----	116.10	mg/kg
8.	Phosphate	-----DO-----	23.15	kg/hect
9.	Sulphate as SO <sub>4</sub>	-----DO-----	15.12	mg/kg
10.	Sand	-----DO-----	37.00	%
11.	Silt	-----DO-----	32.00	%
12.	Clay	-----DO-----	31.00	%
13.	Water Holding Capacity	-----DO-----	26.25	%
14.	Porosity	-----DO-----	22.20	%

Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law







# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/SPL/A/01** Report No: **ECON/2016/A/1517**  
Name & Address of Party: **M/s. Simplex Projects Limited** Format No: **5.10-F-01**  
**12/1-Nehru Sangupta Sarani** Party Reference No: **By Mail**  
**Kolkatta-700087** Reporting Date: **15/11/2016**  
Receipt Date: **10/11/2016**  
Period of testing: **11-14/11/2016**

Sample Description: **AMBIENT AIR QUALITY MONITORING**

### General Information:

Name of Project: Restoration and Adaptive Reuse of Library, Nainital  
Sample Collected by: Lab Representative  
Sampling Location: Near Construction Site, Library, Distt.: Nainital  
Instrument Used: RDS with PM<sub>2.5</sub> Attachment  
Instrument Code: ECON/EQP/01, ECON/EQP/01A & ECON/EQP/01B  
Instrument Calibration Status: Calibrated  
Meteorological condition during monitoring: Clear Sky  
Date of Monitoring: 07/11/2016 to 08/11/2016  
Time of Monitoring: 10:00 AM to 10:00 AM  
Ambient Temperature (°C): Min. 10.0, Max. 20.0  
Surrounding activity: Human Activities & Vehicular Activities  
Scope of Monitoring: Regulatory Requirement  
Control measure if any: No  
Sampling & Analysis Protocol: IS-5182  
Parameters Required: As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	66.18	IS : 5182 (P-23), 2006	100
2.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	35.10	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	7.34	IS : 5182 (P-2), 2001	80
4.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	18.15	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5.	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.20	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sec.-3(i)]16.11.2009.

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number:	ECON/SPL/A/02	Report No:	ECON/2016/A/1518
Name & Address of Party:	M/s. Simplex Projects Limited 12/1-Nellie Sangupta Sarani Kolkata-700087	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016
		Period of testing:	11-14/11/2016

Sample Description: AMBIENT AIR QUALITY MONITORING

### General Information:

Name of Project	: Restoration and Adaptive Reuse of Library, Nainital
Sample Collected by	: Lab Representative
Sampling Location	: Near Back Side, Library, Distt. Nainital
Instrument Used	: RDS with PM <sub>2.5</sub> Attachment
Instrument Code	: ECON/EQP/02, ECON/EQP/02A & ECON/EQP/02B
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 07/11/2016 to 08/11/2016
Time of Monitoring	: 10:10 AM to 10:10 AM
Ambient Temperature (°C)	: Min. 10.0, Max. 20.0
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No
Sampling & Analysis Protocol	: IS-5182
Parameters Required	: As per Work Order

### Test Results

S. No.	Parameters	Test Results	Test Methods	NAAQS*
1	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	68.15	IS : 5182 (P-23), 2006	100
2	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	38.12	PM <sub>2.5</sub> Sampler (Gravimetric)	60
3	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	9.08	IS : 5182 (P-2), 2001	80
4	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	17.10	IS : 5182 (P-6), 1975 Reaffirmed-1998	80
5	Carbon Monoxide (CO), mg/m <sup>3</sup>	0.20	CO Gas Analyser	4

\*NAAQS-National Ambient Air Quality Standard: Schedule-VII, [Rule 3 (3B)], [Part-II-Sub-3(i)] 16.11.2009.

Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number:	ECON/SPL/AN/01	Report No:	ECON/2016/AN/1519
Name & Address of Party:	M/s. Simplex Projects Limited. 12/1 Nelhe Sangupta Sarani Kolkatta-700087	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information

Name of Project	: Restoration and Adaptive Reuse of Library, Nainital
Sample Collected by	: Lab Representative
Sampling Location	: Near Construction Site, Library, Distt. : Nainital
Instrument Used	: Sound Level Meter
Instrument Code	: ECON/SLM/01
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 07/11/2016 to 08/11/2016
Time of Monitoring	: 6:00 AM to 6:00 AM
Ambient Temperature (°C)	: Min. 10.0, Max. 20.0
Surrounding activity	: Human Activities & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if any	: No Any
Sampling & Analysis Protocol	: CPCB Guideline & IS 9989
Parameters Required	: As per Work Order

## Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	$L_{max}$	CPCB Guideline/IS 9989	52.3	43.1	dB(A)
2.	$L_{10}$	CPCB Guideline/IS 9989	32.1	35.2	dB(A)
3.	$L_{eq}$	CPCB Guideline/IS 9989	44.2	38.1	dB(A)
4.	CPCB limit for Residential Zone	dB(A)	55.0	45.0	dB (A)

*[Signature]*



Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Website: [www.econlabindia.com](http://www.econlabindia.com), [info@econlabindia.com](mailto:info@econlabindia.com), [conlab@econlabindia.com](mailto:conlab@econlabindia.com)





## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number:	ECON/SPI/AN/02	Report No:	ECON/2016/AN/1520
Name & Address of Party:	M/s. Simplex Projects Limited, 12/1 Nollie Sangupta Sarani Kolkata-700087	Format No:	5.10-F-01
		Party Reference No:	By Mail
		Reporting Date:	15/11/2016
		Receipt Date:	10/11/2016

### Sample Description:

### AMBIENT NOISE LEVEL MONITORING

#### General Information

Name of Project	Restoration and Adaptive Reuse of Library, Nainital
Sample Collected by	Lab Representative
Sampling Location	Near Back Side, Library, Dist : Nainital
Instrument Used	Sound Level Meter
Instrument Code	ECON/SLM/02
Instrument Calibration Status	Calibrated
Meteorological condition during monitoring	Clear Sky
Date of Monitoring	07/11/2016 to 08/11/2016
Time of Monitoring	6:00 AM to 6:00 AM
Ambient Temperature (°C)	Min: 10.0, Max: 20.0
Surrounding activity	Human Activities & Vehicular Activities
Scope of Monitoring	Regulatory Requirement -
Control measure if any	No Any
Sampling & Analysis Protocol	CPCB Guideline & IS 9989
Parameters Required	As per Work Order

### Test Results

S. No.	Parameters	Protocol	Test Results (dB) (A)		Unit
			Day Time (6:00 AM to 10:00 PM)	Night Time (10:00 PM to 6:00 AM)	
1.	L <sub>Max</sub>	CPCB Guideline/IS 9989	53.7	43.1	dB(A)
2.	L <sub>Min</sub>	CPCB Guideline/IS 9989	38.1	31.8	dB(A)
3.	L <sub>eq</sub>	CPCB Guideline/IS 9989	42.0	37.2	dB(A)
4.	CPCB limit for Residential Zone	dB(A)	55.0	45.0	dB (A)



Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005

(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/SPL/DW/01**  
Name & Address of Party: **M/s. Simplex Projects Limited,**  
12/1 Nehru Sangupta Sarni  
Kolkatta-700087

Project Name: **Restoration and Adaptive Reuse of Library, Nainital**  
Sample Description: **Drinking Water (Tap Water)**

Sampling Location: **Near Construction Site, Library, Distt : Nainital**

Sample Collected By: **Lab Representative**

Sampling & Analysis Protocol: **IS 10500-2012, IS: 3025**

Report No: **ECON/2016/DW/1521**  
Format No: **5.10-F-01**  
Party Reference No: **By Mail**  
Reporting Date: **15/11/2016**  
Receipt Date: **10/11/2016**  
Sampling Date: **07/11/2016**  
Period of Testing: **11-14/11/2016**  
Sampling Type: **Grab**  
Preservation: **Refrigerated**  
Parameters Required: **As per Work Order**

## Test Results

S. No.	Parameters	Test Methods	Results	Unit	Limit of IS 10500-2012	
					Desirable Limit (Max)	Permissible Limit the absence of Alternate Source (Min)
1.	pH ( $\approx 25^{\circ}\text{C}$ )	IS 3025 (P-11): 1984 Reaff 2012	7.40	-	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025 (P-4): 1983	< 5	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984	BDL	NTU	1	5
4.	Odour	IS 3025 (P-5): 1983	Agreeable	-	Agreeable	Agreeable
5.	Taste	IS 3025 (P-7): 1984	Agreeable	-	Agreeable	Agreeable
6.	Total Hardness as $\text{CaCO}_3$	IS 3025 (P-21): 1983 Reaff 2009	180.0	mg/l	200	600
7.	Calcium as Ca	IS 3025 (P-40): 1991 Reaff 2009	66.10	mg/l	75	200
8.	Alkalinity as $\text{CaCO}_3$	IS 3025 (P-23): 1983 Reaff 2003	140.00	mg/l	200	600
9.	Chloride as Cl	IS 3025 (P-32): 1986 Reaff 2009	16.10	mg/l	250	1000
10.	Magnesium as Mg	IS 3025 (P-46): 1994 Reaff 2009	17.25	mg/l	30	100
11.	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2006	340.10	mg/l	500	2000
12.	Iron as Fe	IS 3025 (P-53): 2003 Reaff 2009	0.11	mg/l	0.3	No Relaxation
13.	Copper as Cu	IS 3025 (P-42): 1992	<0.05	mg/l	0.05	1.5
14.	Total Coliform	IS:1622,1981(Reaffirmed 2003)	<2/100 ml	MPN/100ml	-	10.00
15.	E. Coli	IS:1622,1981(Reaffirmed 2003)	Absent	MPN/100ml	Absent	Absent

- Note:
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liabilities of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)





## ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

### Test Certificate

Sample Number: **ECON/SPL/S/01** Report No: **ECON/2016/SS/1522**  
Name & Address of Party: **M/s. Simplex Projects Limited.** Format No: **5.10-F-01**  
12/1 Nellie Sangupta Sarani Party Reference No: **By Mail**  
Kolkatta-700087 Reporting Date: **15/11/2016**  
Project Name: **Restoration and Adaptive Reuse of Library, Nainital** Receipt Date: **10/11/2016**  
Sample Description: **Soil Sample** Sampling Date: **07/11/2016**  
Period of Testing: **11-14/11/2016**  
Sampling Location: **Near Construction Site, Library, Dist. : Nainital** Sampling Type: **Composite**  
Sample Collected By: **Lab Representative**  
Sampling & Analysis Protocol: **IS 2720 & Ministry of Agriculture & Cooperation, G.O.I. Manual-2011**

### Test Results

S. No.	Parameters	Protocol Used	Results	Unit
1.	pH @ 25 °C	SOP based on Ministry of Agriculture & Cooperation, G.O.I. Manual-2011	7.40	--
2.	Conductivity	-----DO-----	0.35	mS/cm
3.	Chloride as Cl	-----DO-----	40.10	mg/kg
4.	Potassium as K	-----DO-----	120.10	kg/hect.
5.	Organic Matter	-----DO-----	0.76	%
6.	Nitrogen as N	-----DO-----	4.16	%
7.	Sodium as Na	-----DO-----	101.68	mg/kg
8.	Phosphate	-----DO-----	22.20	kg/hect
9.	Sulphate as SO <sub>4</sub>	-----DO-----	11.10	mg/kg
10.	Sand	-----DO-----	36.00	%
11.	Silt	-----DO-----	32.00	%
12.	Clay	-----DO-----	32.00	%
13.	Water Holding Capacity	-----DO-----	22.10	%
14.	Porosity	-----DO-----	18.12	%

*Rishi*



Note: 1. The results listed refer only to the tested sample & applicable parameters  
2. Total liabilities of our lab will be restricted to the invoice amount only  
3. The sample will be destroyed after retention time unless otherwise specified  
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law





# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

Sample Number: **ECON/SPL/DW/01**  
Name & Address of Party: **M/s. Simplex Projects Limited,**  
**12/1 Nellie Sangupta Surani**  
**Kolkatta-700087**  
Project Name: **Restoration and Adaptive Rouse of Library, Nainital**  
Sample Description: **Surface Water**  
Sampling Location: **Nani Lake, Distt : Nainital**  
Sample Collected By: **Lab Representative**  
Sampling & Analysis Protocol: **IS 10500-2012, IS: 3025**

Report No: **ECON/2016/SW/1523**  
Format No: **5.10-R-01**  
Party Reference No: **By Mail**  
Reporting Date: **15/11/2016**  
Receipt Date: **10/11/2016**  
Sampling Date: **07/11/2016**  
Period of Testing: **11-14/11/2016**  
Sampling Type: **Grab**  
Preservation: **Refrigerated**  
Parameters Required: **As per Work Order**

## Test Results

S. No.	Parameters	Test Methods	Results	Unit	Limit of IS 10500-2012	
					Desirable Limit (Max.)	Permissible Limit the absence of Alternate Source (Max)
1.	pH (at 25°C)	APHA 22 <sup>nd</sup> Edition, 4500-H-B	7.85	-	6.5 to 8.5	No Relaxation
2.	Colour	APHA 22 <sup>nd</sup> Edition, 2120-B	<5	Hazen	5	15
3.	Turbidity	APHA 22 <sup>nd</sup> Edition, 2130-B	BDL (DL-1 NTL)	NTU	4-2	5
4.	Total Hardness as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition, 2340-C	202.10	mg/l	200	600
5.	Calcium as Ca	APHA 22 <sup>nd</sup> Edition, 3500-CaB	102.50	mg/l	75	200
6.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition, 2320-B	273.10	mg/l	200	600
7.	Chloride as Cl	APHA 22 <sup>nd</sup> Edition, 4500-Cl-B	43.25	mg/l	250	1000
8.	Magnesium Hardness as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition, 2340-B	37.310	mg/l	30	100
9.	Sulphate as SO <sub>4</sub>	APHA 22 <sup>nd</sup> Edition, 4500-E	40.12	mg/l	200	400
10.	Nitrate as NO <sub>3</sub>	IS 3025 (P-36)1988	2.30	mg/l	45	No Relaxation
11.	Fluoride as F	APHA 22 <sup>nd</sup> Edition, 4500-F-D	0.2	mg/l	1.00	1.5
12.	Sodium as Na	APHA 22 <sup>nd</sup> Edition, 3500-Na-B	17.31	mg/l	-	-

*Rush*



Note:

1. The results listed refer only to the tested sample & applicable parameters
2. Total liabilities of our lab will be restricted to the invoice amount only
3. The sample will be destroyed after retention time unless otherwise specified
4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [info@econlaboratory.com](mailto:info@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)



# ECON Laboratory and Consultancy

Nawada Road, Inderpur, Near Defence Colony Police Chowki,  
Dehradun, Uttarakhand-248005  
(ISO 9001 | ISO 14001 Certified | NABL Accredited Laboratory)

## Test Certificate

ECON/SPL/SW/01					ECON/2016/SW/1523	
S. No.	Parameters	Test Methods	Results	Unit	Limit of IS 10500-2012	
					Desirable Limit (Max.)	Permissible Limit the absence of Alternate Source (Max.)
13.	Potassium as K	APHA 22 <sup>nd</sup> Edition	4.15	mg/l	-	-
14.	TKN as N	APHA 22 <sup>nd</sup> Edition	1.34	mg/l	-	-
15.	Total phosphorous as P	APHA 22 <sup>nd</sup> Edition	0.20	mg/l	-	-
16.	COD	APHA 22 <sup>nd</sup> Edition 5220 B	3.10	mg/l	-	-
17.	Phenolic Compound as C <sub>6</sub> H <sub>5</sub> OH	APHA 22 <sup>nd</sup> Edition 5530	<0.002	mg/l	0.001	0.002
18.	Iron as Fe	APHA 22 <sup>nd</sup> 3500-Fe B	0.11	mg/l	-	No Relaxation
19.	Boron	APHA 22 <sup>nd</sup> 3500-Fe B	0.15	mg/l	-	1
20.	Sodium Absorption Ratio	APHA 22 <sup>nd</sup> Edition	1.23	mg/l	-	-
21.	Free Ammonia as N	APHA 22 <sup>nd</sup> Edition	0.62	mg/l	-	-
22.	Dissolved oxygen	APHA 22 <sup>nd</sup> Edition 4500 OC	6.60	mg/l	-	-
23.	BOD (5 Days at 27 °C)	IS 3025, P-44, 1999 (Reaffirmed 2005)	8.00	mg/l	-	-
24.	Zinc as Zn	APHA 22 <sup>nd</sup> Edition, 3111 B	0.11	mg/l	5	15
25.	Arsenic as As	APHA 22 <sup>nd</sup> Edition, 3111 B	<0.012	mg/l	-	No Relaxation
26.	Mercury As Hg	APHA 22 <sup>nd</sup> Edition, 3111 B	<0.002	mg/l	0.001	No Relaxation
27.	Total dissolved Solid	APHA 22 <sup>nd</sup> Edition, 2540 C	565	mg/l	500	2000

*Signature*



- Note:**
1. The results listed refer only to the tested sample & applicable parameters
  2. Total liability of our lab will be restricted to the invoice amount only
  3. The sample will be destroyed after retention time unless otherwise specified
  4. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Web: [www.econlaboratory.com](http://www.econlaboratory.com), email: [uk@econlaboratory.com](mailto:uk@econlaboratory.com), [econlab.consultancy@yahoo.in](mailto:econlab.consultancy@yahoo.in)