

ENVIRONMENTAL MANAGEMENT PLAN
OF
**PROPOSED NEW BUILDING CONSTRUCTION AT SILK
FACTORY RAJBAGH, SRINAGAR (J&K)**



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Introduction

1.1 Background

Jammu and Kashmir holds the key location for the country, geographically, sharing its borders with Himachal Pradesh and Punjab. The state is rich in flora and fauna, which is best attributed to the agro-climatic condition prevalent through the state. The state is famous for its production and export of various commodities like apples , walnuts , honey , saffron and numerous products made from Silk , handicraft / handloom items like carpets , shawls , Pashminas etc. Other than fruits and products made from silk / wool, the state is also famous for its production and export of various sports goods and handicraft items that are primarily made from willow that is unique to the state, commonly known as Kashmiri Willow.

The silk factory at Rajbagh Srinagar was once known as a largest silk factory in the world. The factory, which started functioning from 1939 during the rule of Maharaja Hari Singh, has over the years dwindled. The factory originally started from Ram Bagh Srinagar in 1896 before shifted to its existing location (Rajbagh). Established in 1939, the factory had 121 looms imported from Japan, France and Switzerland. With the passage of time, the machinery had outlived its life as no major up-gradation or re-engineering had been undertaken over the past 70 years. During its heyday, the factory produced about 3.50 lakh meters of silk fabric annually and the product was even exported. Due to frequent breakdowns of the obsolete machinery, the production decreased sharply affecting the factory's viability.

The other factors responsible for the pathetic state of affairs are non-availability of skilled workers, suspension of operations for long periods and inadequate maintenance of machines.

Jammu and Kashmir contributes around 1% to the country's total silk production. Around 23,000 families in Jammu and Kashmir are generating their employment through this industry. Its practiced in around 24-21 villages (35% of the total villages of the state) of the state. There are around 81lac number of Mulberry trees in the state which has increased to the tune of around 10% from last 5 years . The state has around 7557 hectare of area under Mulberry plantation which help in production of around 18096 MT (2012-13) of raw Silk. Other than Mulberry Silk around 61 MT of Vanya Silk is also produced in the state.

Sericulture which has played a prominent role in shaping the rural economy of the state of Jammu and Kashmir is now witnessing a considerable decline. It is important to note that Cocoon production which was around 15 Las kgs per year during the decade of 40's has now reduced to around 3 Lac Kgs per year in 2012. In spite of having conducive climatic conditions and altitude for Bivoltine Sericulture, the state is struggling to keep pace with one of the export orientated industry of the country due to many reasons

Due the deluge of September 2014 in Srinagar, the silk factory remains submerged for many days as a result the factory got damaged upto great extent, have rendered huge population without a livelihood.

The project is for the revival Silk factory at Rajbagh Srinagar keeping the cultural heritage and attraction to tourists in consideration. The work includes Construction of Composite Market Centre for Whole Chain of Silk activity in Govt. Silk Factory Rajbagh, Srinagar. The

work also includes repair and maintenance of existing unit / construction of new civil structure, repair maintenance and replacement of plant and machinery.

The Silk Centre would be set up in the Government Silk Factory Rajbagh Srinagar. Some useful infrastructure is already available within these premises which shall also be utilized optimally for achieving the objective. A conscious decision has been taken to upgrade the infrastructure of Government owned entities with the sole objective of creating market for the products of large number of local population dealing with rearing of sheep and cocoons that are highly skeptical to exploitation by the middlemen owing to resource constraints. The facilities once upgraded will also be instrumental to stabilize the market prices to a great extent as in absence of any local consumption the cocoons will have lesser demand and shall find its way out in the raw form on very low prices thereby making the activity unviable for the large chunk of under privileged population. It needs to be emphasized that the intent of the instant proposal is to extend marketing support to the rearing community as has been explained above and to get domestic silk producers better returns by intensifying inputs and organizational efforts and also the state government focus on an integrated value chain for the benefit of common people.

The proposal assumes more significance owing to the fact that not many large scale industries have been set up which makes it more important to have a credible market linkage established within the reach of local producers with the active governmental support. The project is to be taken under JTFRP funded by World Bank.

Apart from the main intent of securing the interests of the marginalized farming community as narrated above, the successful implementation of the proposal may trigger much needed boost to the overall silk industry in the State which possesses considerable export potential both within and outside the country.

The location of the proposed building on GIS map and Google map are shown in Figure 1.1 and 1.2, respectively.

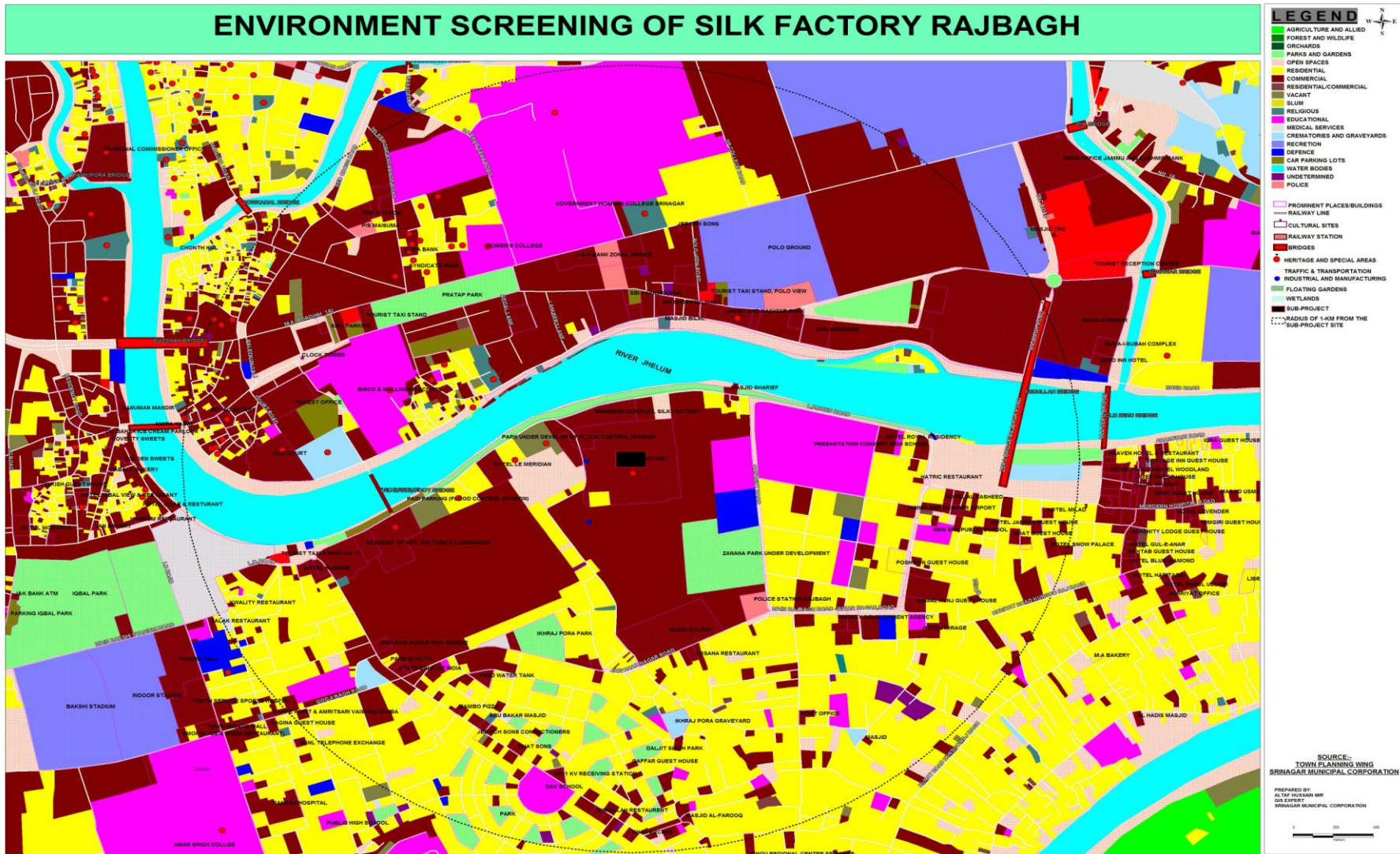


Figure 1.1: Location of Proposed Site on the GIS Map

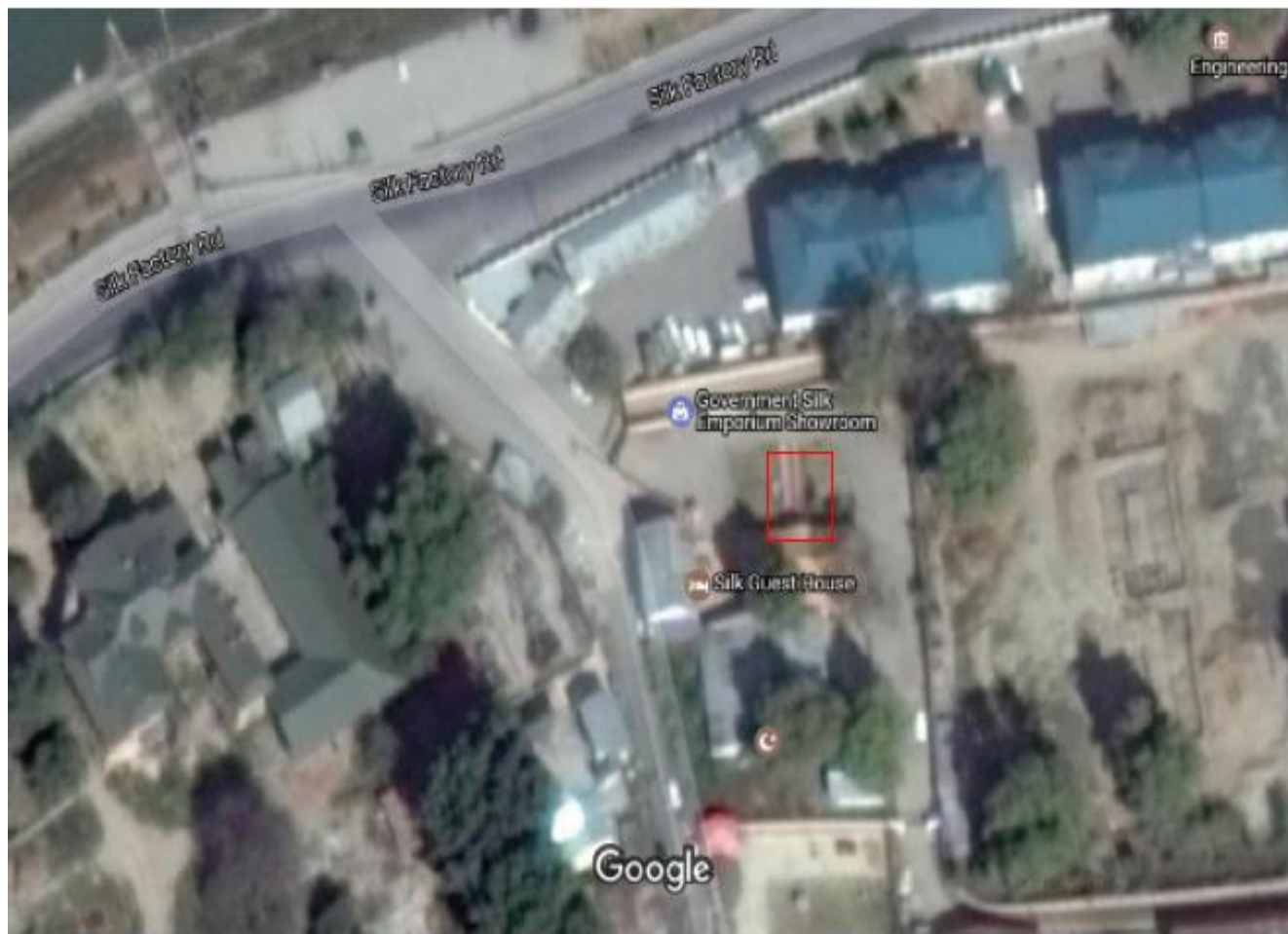


Figure 1.2: Location of Proposed Site on the Google Map

1.2 Environmental Permission Required for the Proposed Building Construction

The proposed building construction is not scheduled activity under the EIA Notification 2006. Therefore, environmental clearance is not required for proposed construction. As tree cutting and forest land are also not involved in the proposed sub-project, therefore, tree cutting permission and forest clearance are also not required. For installation and operation of batching plant, Consent to Establish (CTE) and Consent to Operate (CTO) will be obtained by the contractor from J&K State Pollution Control Board. During construction phase, labour's safety, health and welfare measures will need to be taken by the contractor as per Building & other construction workers (Regulation of Employment and condition of service) Act 1996. The list of environmental regulations applicable to the proposed building construction is as given in **Table 1.1**:

Table 1.1. List of Environmental Regulations Applicable to Proposed Sub-project

Sl. No	Type of Clearance	Applicability	Project Stage	Responsibility
1.	EIA Notification, 2006 under the Environment (Protection) Act, 1986	Not Applicable	Not Applicable	Not Applicable
2.	Jammu and Kashmir Preservation of Specified Trees Act of 1969 and Rules of 1969. Tree felling permission	Not required as no tree cutting is involved.	Not required	Not required
3.	Forest Clearance	Not required as no forest land is involved.	Not required	Not required
4.	The Wildlife Conservation Act, 1972, as amended, J&K Wildlife (protection) Act 1978, as amended provide for protection & management of Protected Areas Wildlife Clearance	Not applicable as no wild life issue is involved.	Not Applicable	Not Applicable
5.	The Ancient	Not required as	During	Contractor

Sl. No	Type of Clearance	Applicability	Project Stage	Responsibility
	Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 provide guidance for carrying out activities, including conservation, construction and reuse in and around the protected monuments.	the area does not fall within or is situated close to any such site of archaeological importance but due to heritage value of existing building, some items will be reused in new building and has been mentioned in EMP/Heritage report	Construction	
6.	Water (Prevention and control of pollution) Act, 1974 as amended Air (prevention and control of pollution) Act, 1981, as amended	Applicable for hot Batching Plant to be obtained from J&K State Pollution Control Board	Construction (Prior to work initiation)	Contractor
6.	Hazardous Waste Authorization for disposal of hazardous waste like used oil, paint wastes, etc	Applicable and to be obtained from J&K State Pollution Control Board	Construction (Prior to work initiation)	Contractor
7.	NOC for crusher, if crusher is installed for aggregate	Applicable and to be obtained from J&K State Pollution Control Board	(Prior to work initiation)	Contractor
8.	Environmental Clearance for stone quarry (if new quarry is opened by the contractor for boulders/stone	Applicable and to be obtained from State Environmental Impact Assessment Authority/ District Level	(Prior to operation quarry)	Contractor

Sl. No	Type of Clearance	Applicability	Project Stage	Responsibility
		Environmental Impact Assessment Authority.		
9.	Building and Other Construction Workers (Regulation of Employment and Conditions of service) Act of 1996 and Rules 1998 provide for regulation of employment and conditions of service of the building and other construction workers as also their safety, health and welfare measures in every establishment which employs ten or more workers.	Applicable for Labour's Safety, health and Welfare. Registration of each establishment within a period of sixty days from the commencement of work and registration of building workers as beneficiaries under this Act. Compliance to provisions of health and safety measures for the construction workers in conformity with ILO convention No.167 concerning safety and health in construction	Construction Phase	Contractor
10.	Certificate of Pollution Under Control for Vehicles	Applicable for vehicle engaged in construction activities	Construction Phase	Contractor

2.0 Project Description

2.1 Proposed Project Details

Firstly, the damaged buildings existing in the premises and declared unsafe by R&B Department shall be pulled down completely with a future plan of building these from the scratch. The next step shall be to carry out repairs to those buildings which can be made operational - safe after due repairs.

It is proposed that new structures shall be of Ground floor plus First Floor. It shall have a RCC Columns and beams to make it safe in case of any disaster like Sept. 2014 etc like floods.

The building is having two floors and shall provide the centre with an opportunity to house machinery in the first floor, while having cocoon auction facilities in the ground floor from where the rearers and reelers shall have more effective coordination and understanding. In respect of other two existing blocks which require extensive repairs, it is proposed to undertake complete up-gradation of these buildings so that these are made fully safe and functional for the operation of the plant. This is being proposed in view of bringing the Market Centre to operational stage in minimum possible time.

The designing of buildings is as per NBC-latest, IS-875 and IS-1893, IS-13920. The technical specification will be as per guidelines in CPWD. The finishing will comprise of modern and hygienic and low maintenance material. All the civil codes shall be monitored and strictly followed as per the consultant's drawings and guidelines. The external façade of building will comprise of heritage fabric to gel with the surroundings. The flowing infrastructure will be developed in proposed sub-project.

- Construction of two storey RCC Framed structure for Weaving section
- Construction of two storey RCC Framed structure for Office Block
- Dismantling of old unsafe structure of throwing section
- Repair / Renovation of Weaving Section
- Repair / Renovation of Warping / finishing Section.
- Construction of Paths / Roads
- Construction of Compound Walling
- Construction of Storm Water Drains.

2.2 Heritage Character and Conservation

Heritage is deemed to mean those buildings, artifacts, structures, areas and precincts that are of historic, aesthetic, architectural or cultural significance and should include natural features within such areas or precincts of environmental significance or scenic beauty such as sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, etc. It must be recognized that the 'cultural landscape' around a heritage site is critical for the interpretation of the site and its built heritage and thus is very much its integral part. The conservation of built heritage is generally perceived to be in the long term interest of society. This can be better understood if categorized under 'economic', 'cultural', and 'environmental', although they are not mutually exclusive and, indeed, they are often interlocked. Most buildings are capable of beneficial use, whether for their original

purpose or for some other use. Buildings and their precincts need to be used in order to survive and such use can be made into an economically viable enterprise. However, the cause of preservation and conservation of heritage can be served only by providing statutory backing to the listing. Only the statutory backing makes it an effective tool for conservation. The Heritage value of the site has been given due consideration in the designing of new structure. The proposed structure will come up on same location as of the unsafe structure. Various heritage elements have been incorporated in the design to match with the existing fabric. The external façade has been designed with due consideration to its heritage value. The development and landscaping of the site has been proposed in order to maintain and conserve the character of each building. The storm water drain will help to reduce the water logging at the site where by reducing the vulnerability of damages due insistent rains.

The external of the buildings will be of traditional lime surkhi pointing. The bands around the windows will jell the building with the old heritage character. The roof of the proposed structure has been designed keeping in consideration the functional and heritage requirements of the structure. The state of art machinery dating a back as in 18th century is hosted in the premises which can be a major tourist attraction of the area. The footfall increase in the area will lead to more visitors thereby leading to the heritage tourism of the state.

2.3 Soils

Soils. In the regions of Jammu and Kashmir the soils are loamy and there is little clay content in them. Poor in lime but with a high content of magnesia, the soil is treated with chemical fertilisers and enriched with green manure and legume before cultivation. There is sufficient organic matter and nitrogen content in the alluvium of the Kashmir valley as a result of plant residue, crops stubble, natural vegetation and animal excretion. The valley of Kashmir has many types of soils like: Gurti (clay), Bahil (Loam), Sekil (Sandy), Numbal (Peats), Surzamin, Lemb, Floating garden soils and Karewa soils. No wonder, in Kashmir, soil is virtually worshipped as a miracle of divinity as it is a source of wealth of the land.

2.4 Project Cost

The total cost of the proposed sub-project works out to be Rs. 2354 Lakhs

2.5 Time of Schedule for Completion

The proposed project will be completed in 18 months

3.0 Description of Environment

The collection of baseline information on bio-physical and social aspects of the project area is the most important reference for environmental screening and conducting Environmental Assessment (EIA) study. Based on the existing environmental scenario, potential environmental impacts of the proposed sub-project will be identified and accordingly environmental management plan will be prepared. The existing environmental conditions at and around the proposed sub-project site, have been obtained by the site visits and secondary data collection from published source and various government agencies.

The environmental screening for the proposed sub-project is given in **Annexure 1**. The baseline environmental conditions of the area are as given below:

3.1 Topography and Physiography

The subproject area is located in southwest direction of the Srinagar city. Physiographically, Srinagar city constitutes a part of the flood plain of Jhelum, which is largely flat and featureless with sub-recent alluvial deposits. The topography shows gentle terrain slope from East to West. General elevation of the subproject area varies between 1,585m and 1,590m above mean sea level. The area is flood prone and in September 2014 divested flood was experienced in the River Jhelum which is nearer to Silk Factory Rajbagh. The photographs of topography and physiography of the site are given in **Figure 3.1**.



Figure 3.1: Photographs of Topography & Physiography of the Site

3.2 Geology and Geomorphology

Geology and Geomorphology. The Geology of the territories of Jammu, Kashmir and Ladakh have been divided into three different structural Zones:

- The Panjal
- The Zanskar
- The Tertiary Groups

These three Geological divisions form the basis of the four physical divisions of the State. The Panjal forms the Outer plain, the Outer Hills and the Middle Mountains. The Zankar includes the whole of the eastern region from Spiti and Lahol (32.170N. Latitude) to the lofty

Karakoram mountains in the north. The Tertiary Groups include the valley of Kashmir and other river Valleys.

The oval valley of Kashmir is longitudinal. It is about 1700 m above sea level. There is a high wall of mountains round the valley. These rise to a height of 5515 metres above sea level. The only outlet of the valley is Baramulla where the Jehlum flows out through a narrow gorge. The entire drainage of the valley of Kashmir and its surrounding areas has only this outlet. In the north, Kashmir has many volcanic rock formations. These are mostly stratified and several thousand metres thick. There are many layers of sedimentary rocks which are found in Liddar valley, Baramulla district and Banihal Verinag section of the Pir Panjal range. Lime stones and shales are common. The rock layers have many fossils. Near Yark and to the extreme north, shales have been found showing that the region was under sea in the geological past

3.3 Seismicity of the Area

The project area is located the highest earthquake prone seismic zone V. Among the most notable are the Northwest Kashmir earthquake of 2005 (Mw 7.6) & 2002 (Mw 6.4), Pattan earthquake of 1974 (Mw 7.4), Kangra earthquake of 1905 (Mw 7.8) & in 1885 (Mw 7.5). According to the seismic zonation map for India, the region falls in seismic zone V. Most of the earthquakes are generated by the fault movements and in Jammu & Kashmir region, there are parallel faults trending northwest to south east.

Seismic hazard map for Jammu & Kashmir State is shown in **Figure 3.2**

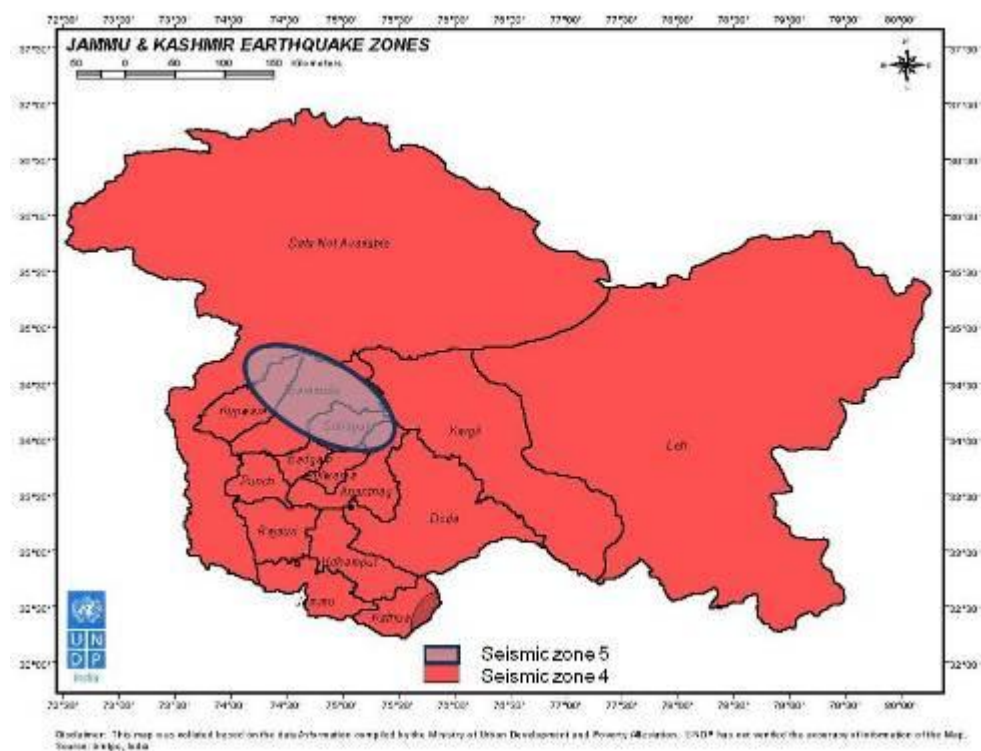


Figure 3.2: Seismic Hazard Map of Jammu & Kashmir

3.4 Climate & Rainfall

The climate of the area is Temperate cum Mediterranean type. In the higher reaches temperature remains cold throughout the year. Average minimum and maximum temperature varies from -5°C to 32°C . The winter season starts from the middle of the November and severe winter conditions continues till the middle of March. The area receives an average annual precipitation of about 557 mm in the form of rain and snow for about 60 days.

3.5 Air Quality

The Silk Factory Rajbagh is located in city centre. As there are residential, commercial as well as official activities near the construction site, therefore there will be significant source of air pollution both commercial and vehicular. Ambient air quality at the proposed construction site appears slightly good but during construction phase Ambient air quality will be monitored as per EMP.

3.6 Noise Levels

As there are residential, commercial and official activities near the proposed construction project site, noise levels at the proposed construction site are high.

3.7 Ecology

There is no tree or shrubs in the vicinity of the proposed new building construction at Silk Factory Rajbagh. Therefore, cutting of tree will not be required for construction of the proposed new building. In the area around the proposed site commonly observed trees species *Abies pindrow*, *Celtis australis*, *Crataegus songaric*, *Euonymus hamiltonianus*, *Euonymus fimbriatus*, *Fraxinus hookeri*, *Juglans regia*, *Morus alba*, *Parrotiopsis jacquimontiana*, *Pinus excelsa*, *Platanus orientalis*, *Populus caspica*, *Prunus cerasifera*, *Prunus cornuta*, *Pyrus malus*, *Quercus robber*, *Rubinia pseudoacacia*, *Salix alba*, *Salix babylonica*, *Salix wallichiana*, *Taxus wallichiana*, *Ulmus lavigata*, *Ulmus wallichiana planchon*, etc.

There is no ecological sensitive location like wildlife sanctuary, national park or bio reserve within 10 km distance from the proposed building construction site.

3.8 Socio-economic Conditions

Jammu and Kashmir's economy is predominantly dependent on agriculture and allied activities. The Kashmir valley is also known for its sericulture and cold-water fisheries. Wood from Kashmir, popularly known as Kashmir Willow, is used to make high-quality cricket bats. Kashmiri saffron is also very famous and brings the state a handsome amount of foreign exchange. Agricultural exports from Jammu and Kashmir include apples, barley, cherries, corn, millet, oranges, rice, peaches, pears, saffron, sorghum, vegetables, and wheat, while manufactured exports include handicrafts, rugs, and shawls. Horticulture plays a vital role in the economic development of the state. With an annual turnover of over Rs. 300 crore, apart from foreign exchange of over Rs. 80 crore, this sector is the next biggest source of income in the state's economy. The region of Kashmir is known for its horticulture industry and is the

wealthiest region in the state. Horticultural produce from the state includes apples, apricots, cherries, pears, plums, almonds, walnuts etc.

According to the 2011 census, Srinagar district has a population of 12.36 Lakhs. The district has a population density of 703 inhabitants per square kilometre. Its population growth rate over the decade 2001-2011 was 23.56%. Srinagar has a gender ratio of 879 females for every 1000 males, lower than the national average of 940, and a literacy rate of 71.21%., higher than the national average of 64.3%.

4.0 Anticipated Environmental Impacts

The anticipated environmental impacts due to the proposed building construction can be direct as well as indirect. The direct area of influence includes quarry, crusher, camp, batching plant and construction site for the proposed building. The anticipated impacts on various environmental components can occur during design, pre-construction, construction and operation stages.

The description and magnitude of anticipated environmental impacts due to proposed building construction on the various environmental components are presented in the following sub- sections

4.1 Consideration of Environmental Impacts During Design of Construction of Proposed Buildings

The important environmental impacts for consideration during design of the proposed buildings are given blow:

4.1.1 Hydrological Study

The project site has observed devastating floods in September 2014 because of floods in river Jhelum which is nearer to the construction site thus damaged the existing buildings of Silk Factory completely. Therefore, hydrological study and runoff calculations for extreme flood/rains under the climate change scenarios must be carried out and considered for designing of the proposed building with excess runoff flow/flood safeguard of river Jhelum.

4.1.2 Seismic Factor in Design of Building

The construction of proposed building site at Silk Factory Rajbagh is located in Seismic zone V and prone to high intensity earthquakes. While designing of building components, suitable seismic load factor must be taken into consideration. Anti dislocation device for slabs etc should also be considered in building design/construction to withstand horizontal force during high intensity earthquakes.

4.1.3 Snow fall on Proposed Building Construction Site

At the proposed building construction site in Silk Factory Rajbagh, snow fall occurs during extreme winter. Therefore, while designing the proposed building, snow fall load over building should be taken into consideration.

4.2 Anticipated Impacts During Construction and Operation Phases

Anticipated impacts on various environmental components during construction and operation phases of the proposed Sub-project are described below:

4.2.1 Impact on Physiography and Topography

Since the proposed buildings will be constructed in place of existing buildings without any land acquisition, impact on the topography and physiography of the area would be negligible during construction and operation phases of the proposed sub-project.

4.2.2 Impact on Soil

Soil is one of the most important components of the physical environment. During construction of the proposed buildings, the potential impacts on soil are discussed as given below:

Construction Phase

The construction phase of the sub-project will not have any major impact on the topography and soil characteristics of the area. However, some minor changes in topography are expected due to excavation and other construction works during the construction phase. Open defecation by construction workers, Improper storage and disposal of construction spoils and unusable wastes and fuel and lubricants can contaminate soil. However, careful handling and minimization of waste as well as stacking of materials and equipment at designated location with regulated movement of vehicles and equipment, proper housekeeping at storage and fuelling sites can avoid such impacts.

Operation Phase

During operation phase of the proposed sub-project, topography and soil will not be affected, therefore no impact is anticipated and no mitigation measure is required.

4.2.3 Degradation of Water Quality

Construction Phase

No adverse impact on water quality is anticipated during the construction phase. Contractor will have to ensure that during construction phase materials like earth, stone or appendage are disposed of in a way that does not block the natural flow of water of any water course and to prevent temporary or permanent flooding of the site or any adjacent area. The likely expected problems associated during the construction process can be kept under control by adopting proper mitigation measures.

Operation Phase

No adverse impact on water quality is anticipated during operation phase of the proposed sub-project.

4.2.4 Impact on Ambient Air Quality

Construction Phase

Generation of dust is anticipated during transportation, excavation and construction activities. Certain volumes of dust and gaseous emissions will also be generated during the construction period from construction machineries like mixers, excavators, vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include Respirable Suspended Particulate Matter (PM_{2.5} and PM₁₀) and gaseous emissions (NO_x

and SO₂). However, transportation of construction materials will be confined to adequate trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction activities only.

Considerable amount of exhaust emissions of carbon monoxide (CO), unburned hydrocarbon, sulphur di-oxide, particulate matters, nitrogen dioxide (NO₂), etc, will be generated from the DG set, construction equipment and batching plant. Batching plant should be located away from the populated areas and be fitted with the air pollution control equipment and emission shall meet National Emissions Standards/J&K State Pollution Control Board standards. Further, the batching plant must be sited at least 250 m in the downwind direction from the nearest human settlement.

Ambient air quality monitoring should be carried out during construction phase. If monitored parameters are above the prescribed limited, suitable control measures must be taken.

Operation Phase

During operational phase of proposed sub-project, ambient air quality will not be affected, therefore, no impact is anticipated and no mitigation measure is required.

4.2.5 Impact on Noise

Construction Phase

During construction phase, some noise will be generated from the various construction activities like equipment and vehicles engaged in transportation of construction materials, from the batching plant and operation of DG sets. However, transportation of construction materials will be confined to the requirement per day, depending upon extent of construction activity. Further the noise associated with the equipments shall be reduced with the application of the lubricant. The increase in noise levels is expected due to construction activities. However, these noise levels will be confined to the work sites only and will be temporary in nature occurring mostly during daytime.

Operation Phase

During the operational phase, no impact is anticipated on the noise levels.

4.2.6 Management of Spills and Wastes

During the construction of the proposed buildings, demolition wastes, excavated earth from foundation, construction debris, used oil from maintenance of DG set and construction equipment, lube oil containers, solid waste, etc will be generated. Such wastes may cause deterioration of soil quality and water quality in proposed sub-project area. These wastes must be collected and disposed off appropriately.

4.2.7 Impact on Flora, Fauna and Ecosystem

The construction activity will be carried out in urban areas of the city. Therefore, no adverse impact on fauna and flora is anticipated due to the proposed activity. The sub-project does not involve cutting of any scheduled tree or any other tree during execution

4.2.8 Impact on Socio-economic Environment

There is no land acquisition required for the proposed buildings construction. The construction and operation phases of the proposed buildings will have some beneficial impact on social environment. Some increase in income of local people is expected as some local unskilled, semiskilled and skilled persons may gain direct or indirect employment during construction phase of the proposed sub-project. Since the immigration of work force during construction phase is likely to be very small, the social impacts on literacy, health care, transport facilities and cultural aspect are expected to be insignificant.

5.0 Public Consultation

Public's consultations and participation have been viewed as a continuous two way process, involving, promoting of public understanding of the processes and mechanisms through which developmental problems and needs are investigated and solved. The public consultation, as an integral part of environmental screening and assessment process throughout the project preparation stage not only minimizes the risks and unwanted political propaganda against the project but also abridges the gap between the community and the project formulators, which leads to timely completion of the project and making the project people friendly.

During environmental screening and impact assessment, public consultations were carried and issues related proposed building construction was raised during project specific consultations. During the consultation on 25/05/2017 at sub-project site, the following issues were discussed. Photographs of public consultation are given in **Figure 5.1**. The signatures of participants, who participated in the public consultation, are documented in **Annexure 2**.

5.1 Issues Discussed During Public Consultation

The issues discussed during public consultation for the proposed buildings construction are given below:

- About proposed project, source of assistance and its implementation/ execution etc.
- Information on the benefits of the subproject in terms of factory infrastructure/equipments and environmental enhancement
- Information of the impacts from the proposed building construction during construction stage in terms of inconvenience to customers, factory staff, general public, air and noise pollution, etc.
- Occurrence of disaster like floods and cloud burst in past.
- Whether construction activities will cause any type of health hazard or not?, and mitigation measures.
- Discussions among general public and factory staff for sharing of information related to the proposed building construction, environment policy of World Bank, direct and indirect impacts of improvement/construction work on environment.
- Any loss of land/structure/business or other community property due to proposed sub-project?

- Any damage to historical or cultural monuments due to the proposed sub-project?
- Any impact on trees and measures to be taken for saving scheduled trees (Chinar, Mulberry, Walnut) in close vicinity of the proposed construction site.
- Any possible problem to be faced by the local people in their daily activities due to the proposed building construction works

5.2 Feedback Received During Public Consultation

Generally the staff members of silk factory and few other people consulted was well aware about the proposed sub-project. As the September 2014 floods caused extensive damages to the integrated value chain of the silk production and its subsequent consumption affecting the livelihood of huge number of population associated with the trade at various levels of cultivation and consumption. The people associated with this profession want to regain the lost ground and to secure their livelihood mainly of weaker section of the society. They have very much enthusiasm in introducing various initiatives for their survival. They are facing very much difficulty in day to day life due to absence of their income. They wanted that the sub-project may be executed on a fast track basis so that this problem is eliminated.

In addition people belong to labour force wanted that they shall be provided employment during the sub-project execution. People in general were very enthusiastic about the benefits of the sub-project in terms of up-gradation of Silk Factory infrastructure and also an improvement in the environmental quality.

People are ready to extend all types of support during execution of the sub-project. The proposed project will not have adverse effects on local population in their daily activities due to construction work as the construction is confined within the boundary

JKI&C department ensured that the requisite environmental management measures shall be incorporated in EMP and public consultation shall be a regular process during all stages of the sub-project to solve any issues arising out of the proposed works.



Figure 5.1: Photographs of Public Consultation at Silk Factory Rajbagh

6.0 Environmental Management Plan

6.1 Introduction

This chapter describes the environmental management plan for the Silk Factory building construction project. The EMP applies to, and will be implemented throughout, all phases of the sub-project.

6.2 Responsibility of implementation of EMP

The Contractor shall take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from unsafe construction practices, pollution, noise or other causes arising as consequence of his methods of operation.

The Contractor will abide by the Environmental, Health and Safety (EHS) measures listed in the Environmental Management Plan (EMP) given below. The Contractor shall include the EMP requirements in the Programme of Works and the Bill of Quantities. The requirements stated in the EMP should therefore be studied properly and the bid should be priced accordingly. All items shall be deemed incidental to work unless otherwise provided for in the price schedule.

The Contractor is free to adopt any similar or superior environment, health and safety management practices with the caveat that the process should meet the basic minimum requirements as stated in the EMP provided in this section. The Engineer's check and certification for payment, in accordance to requirements under Clause 40.2 of GCC, shall include the performance review of the Contractor with regard to compliance of the Environment Management Plan.

Adverse impact/s on the environment caused due to non-adherence of legal and/or EMP requirements during pre-construction stage, execution of civil works or at the works completion stage shall be made good at Contractor's own expenses.

6.3 Environmental Management Plan

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
1.	Appointment of Health and Safety Officer	Prior to commencement of construction, the Contractor shall appoint a qualified/experienced Health and Safety Officer, who shall be responsible for day-to-day implementation of activities stated in the EMP. The Contractor's Project Manager(s) in the office and at the site shall be responsible for the over-all implementation of EMP provisions and will coordinate implementation of the said plan with the concerned agencies, stakeholders and internal staff/ workers.
2.	Work Programme/ Planning	Immediately after mobilization and as part of the Work Programme, the Contractor shall submit a plan including a method statement and timeline about specific actions that will be taken to implement the provisions mentioned in the EMP. The method statement will specifically include among other environment, health and safety aspects, a Building Demolition

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		and Debris Management Plan.
3.	Information Dissemination	<p>a) Project Information Board showing the name of work, project cost, duration, date of commencement, date of completion, executing agency and contact details (including telephone number/s) for providing suggestions/filing grievances shall be displayed prominently in both English and in vernacular.</p> <p>b) Advance information and periodic update (at least once in a month) about construction schedule, safety measures, pollution abatement measures and other such details shall also be displayed.</p>
4.	Regulatory/ statutory clearances/ approvals	<p>a) Prior to construction commencement, the Contractor shall obtain all requisite statutory clearance/s for setting-up construction camp including labor camp; plants/equipment; use of material sources etc. as required in the light of central/state acts/regulations that apply to this work.</p> <p>b) Contractor will coordinate with Employer to plan and dispose off at a pre-approved location any unserviceable/unusable/debris arising from demolition of existing building.</p> <p>c) The Contractor shall obtain Labour License and all required insurance as specified in the contract conditions from the concerned authorities. Originals will be checked/verified by the Engineer and a copy shall be available at the site office at all times.</p> <p>d) The Contractor is required to abide by all conditions laid out in the said clearances/consents given by the regulatory authorities. The monthly progress report shall include the status and action taken for each of the conditions mentioned in such permits/ consent letters/ clearances.</p>
5.	Consultation and Consent/s	<p>The Contractor shall consult and obtain written consent/s of landowners for temporary use of land for all construction related activities including that for:</p> <p>a) Setting-up and operation of construction (including plant site) and/or labour camp;</p> <p>b) Disposal of debris and other waste material in line with EMP conditions and as approved by Employer.</p> <p>c) The Contractor shall consult the Employer and obtain written consent for temporary use of land within the factory premises for setting-up and operating a construction yard, including toilets and other amenities, if the said premises will be used for such a purpose.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
6.	Construction Camp/Plant Site	<p>a) The Contractor shall construct his own site office, store/material yard and labour camp with facility for water, sanitation/toilets, electricity, safety, security and other requisites.</p> <p>b) Location: The Contractor will construct/erect construction camp/ plant only after due written approval of the Engineer-in-Charge is obtained. Batch mix plant will be located at least 500 mts. away from habitation, preferably in the downwind direction.</p> <p>c) Campsite shall be located and constructed in a manner that minimizes interface with host/local communities or their resources (water etc.) and ensures safety of its residents and surrounding people.</p> <p>d) Material stocks/yards shall be located (preferably in the downwind direction) and covered so as to prevent dust pollution that may affect near-by residents/users.</p>
7.	Engaging Labour/Workers	The Contractor preferably will use unskilled/semi-skilled labour from the surrounding area to give the maximum benefit to the local community whenever this is possible.
8.	Labour Camp Establishment and Management	<p>a) All work forces are to be provided with suitable accommodation, if required or they can return to their places of residence after the end of day's work. Pooled transportation facilities as may be required, will be provided by Contractor.</p> <p>b) Location and Lay-out: The location, layout and basic facility provision of labour camp will be submitted to Engineer prior to its construction and a written approval shall be sought by the Contractor before proceeding with site finalization and construction on the ground.</p> <p>c) Accommodation and Basic Amenities The Contractor will follow all relevant provisions of the Building and the other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and other conditions stated in the EMP for construction and maintenance of labour camp.</p> <ul style="list-style-type: none"> • All weather shelter with the required tenement size, toilets, bathrooms and washing area shall be provided, as per provisions of the Labour Laws. • Separate toilet facilities and bathrooms shall be provided for the women workers. • If a common mess is not provided/ operated, additional space for cooking shall be provided. • The Contractor will maintain necessary living accommodation and ancillary facilities in functional and hygienic manner.

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		<ul style="list-style-type: none"> • The Contractor will construct and maintain all labour accommodation in such a fashion that uncontaminated clean water is available for drinking, cooking, bathing and washing. • Fans and proper ventilation (turbine type ventilators) will be provided in labour accommodation. • Workers will be provided with beds and no worker will be allowed to sleep on the ground. • Necessary HIV/AIDS prevention measures will be put into place and awareness programs at least once in a quarter shall be organized. <p>d) A residential facility (for selected number of workers such as security guards etc.) if allowed within the construction zone shall have separate entry and exit, not interfering with the operation of the two other buildings in the factory premises.</p> <p>e) Fuel for Cooking: Fuel wood use will not be allowed. LPG cylinders will be provided at labour camp by the Contractor.</p> <p>f) Potable water supply: Sufficient (minimum 20 liters at any given point of time) and clean (potable) water for drinking shall be placed in the mess/labour camp and at the construction site.</p> <p>g) Fire Safety: Adequate fire safety precautions shall be taken and the required fire safety equipment (such as fire extinguishers) shall be provided by the Contractor.</p>
9.	Sanitation	<p>a) Workers shall not be allowed to defecate in the open. Proper toilets fitted with septic tank and with required hand washing facility will be provided by the Contractor at the camp/labour camp and construction site.</p> <p>b) The Contractor will ensure that :</p> <ul style="list-style-type: none"> • The sewage system for the camp is designed, built and operated in such a manner that no health hazard occurs and no pollution to the air, ground water or adjacent water sources takes place. • Waste water generated from the sanitary facilities of labour camp is disposed in a septic tank/soak pits. • Separate toilets/bathrooms, wherever required, will be provided for men and women, marked in English and in local language. • Toilets are provided with septic tank/s. • Adequate water supply is provided in all toilets and urinals. • Night soil is disposed off with the help of local municipal extractor, if such an arrangement exists.
10.	Solid Waste Management	<p>a) Burning of wastes will not be allowed.</p> <p>b) The Contractor will provide garbage bins in the camp and</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		<p>construction site and it will be ensured that these are regularly emptied and waste is disposed off in a hygienic manner as per the Solid Waste (Handling and Management) Rules, 2016.</p> <p>c) Solid waste generated at the construction site, plant/camp site, will be collected in covered waste bins and segregated as biodegradable (food waste, paper, etc) and non-biodegradable (plastic, polyethylene bag etc.).</p> <p>d) Waste food should be stored in sealed containers and disposed of at designated/appropriate locations. Waste food or waste from kitchen should not be thrown around the site as it will only attract vermin/pests. Biodegradable (food waste, paper etc.) solid waste should be disposed in a compost pit or in a place/manner followed by Srinagar Municipal Corporation.</p> <p>e) Polyethylene/plastic wastes will be stored in empty cement bags and should be sent for recycling.</p>
11.	Potable Water at Worksite	The Contractor shall provide potable water facilities at the building construction site in an accessible place, as per standards set by the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
12.	Site Clearance	Though no tree cutting or vegetation removal is required for the construction of the new building, the Contractor shall take precautions to avoid damage to trees and vegetation in the off-site areas of operation.
13.	Protection of Surrounding Properties	<p>Contractor shall take due care to protect and prevent damage/s to the following during preparatory and construction work of the new building within Silk Factory premises:</p> <p>a. Existing structures, including the showroom with the premises</p> <p>b. Access/haul road</p> <p>c. Structures surrounding the Silk Factory</p> <p>In case of any damage due to the construction activity or negligence, the restoration/repairs shall be carried out by the Contractor at his own cost.</p>
14.	Water Logging	<p>a) The Contractor shall ensure that civil work and related activities such as clearing and grubbing, stacking of materials and debris disposal are carried out in a manner that avoids water logging.</p> <p>b) Ensure no water logging occurs along barricaded operational area during rainy days/season.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		c) The waste water from construction zone and/or camp sites should not be disposed into nearby water bodies or in a manner that causes a possibility of water logging.
15.	Procurement of Materials (including water extraction/use)	<p>a) The Contractor shall not procure any kind of construction material (such as aggregates, sand, earth and water) from ecologically protected and/or sensitive areas.</p> <p>b) The Contractor shall procure material from quarries/crushers/borrow areas that have been approved/licensed by the State Govt. A copy of such an approval and/or consents from the concerned authority shall be submitted to the Engineer prior to procuring and using the material.</p> <p>c) Sand shall be procured from approved sources and vendors.</p>
16.	Worksite Safety Management	<p>a) Construction Safety Plan to be prepared by the Contractor will identify necessary actions in the event of an emergency. Specific actions to be taken during Building Demolition and Clearance shall be included in this plan.</p> <p>b) Temporary barricades shall be provided to delineate construction zone, including material stacking areas from the remaining area of the Silk Factory. The construction area along with its labour facility, if any shall be completely barricaded to prevent entry and accidental trespassing of workers, staff or others into the construction site. Warning signage shall be installed.</p> <p>c) All operational areas shall be access controlled with fixed entry and exit points. Watch and ward facilities at all times will be provided by the Contractor.</p> <p>d) Proper warning signage will be installed on the access road next to the construction site about movement of construction machinery and vehicles.</p> <p>e) There shall be adequate and sufficient lighting arrangements during work at night in case it is permitted by the Engineer.</p> <p>f) Construction materials shall be stacked in a suitable place/manner without obstructing the access. Necessary measures shall be taken for smooth and safe movement of men and material.</p> <p>g) Material safety data sheet record of fuel and other inflammable chemicals shall be maintained at the site.</p> <p>h) Safety signage and posters for generating awareness will be provided at the work site.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
17.	Safety of Staff/Workers/ Labour	<p>a) The Contractor will make sure that during the construction work all relevant provisions of the Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Act, 1996 are adhered to. The Contractor will comply with all the precautions as required for ensuring the safety of the workmen as per country's labour regulations and International Labour Organization (ILO) Convention No. 62 as far as those are applicable to this contract.</p> <p>b) All measures required for ensuring safety and health of the workers shall be taken up by the Contractor. This includes provision and enforcement on use of appropriate personal protective equipment; precautions to be taken during Building Demolition, first aid facilities at camp, plant site and work zones; emergency response arrangements; proper storage of hazardous/ toxic and/or polluting materials; measures for ensuring electrical, fire and mechanical safety arrangements.</p> <p>c) The Contractor shall provide and ensure enforcement with zero tolerance the following:</p> <ul style="list-style-type: none"> • Hard hat or helmets to all workers, supervising staff and inspecting official entering work site, plant area, and engaged in loading/ unloading/demolition operations. • During reinforcement/fabrication operation, helmets, protective eye wear, gum boots and hand gloves shall be provided to labour/workers at the construction site. • Safety vests will be used by workers when on the construction site. • Protective footwear, protective goggles and nose masks (as required) will be provided to the workers employed. These shall be provided to all workers employed for handling of cement, mortar, concrete and similar dust generating operations shall be provided. • Welder's protective eye-shields will be provided to workers who are engaged in welding works. • Earplugs will be provided to the workers exposed to high noise levels. • Nettings below and on the sides of overhead construction to prevent mishaps due to accidental fall of a workman, tool and/or debris shall be provided. • Proper moving guards will be provided at all moving machines, like motors and pulleys. <p>d) All workforce on the construction site shall be provided with identity cards.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		e) High risk areas are to be provided with warning signage.
18.	First aid and Emergency Response Arrangements	<p>a) The Contractor will arrange for:</p> <ul style="list-style-type: none"> • Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall be provided in all work zones. • Trained first aid personal will be available at the construction site. • Emergency numbers will be displayed prominently at camp and construction site. • Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can be used as ambulance, will be available at construction site. <p>b) The Contractor shall identify nearby hospital, which could be used in case of emergency.</p> <p>c) The Contractor will make required arrangements so that in case of any mishap in the construction site, all necessary steps can be taken for prompt first aid treatment.</p> <p>d) First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</p> <p>e) All supervisory staff shall be provided with mobile phones for better communication across all operational areas, in case of emergency or otherwise.</p>
19.	Electrical Safety Measures	<p>a) All electrical equipment/cables/wires to be used in construction shall confirm to the relevant BIS specifications/codes.</p> <p>b) Contractor will ensure that such equipment/cables/wires are free from patent defect and maintained in good working order (as per the owner manual supplied by the manufacturer) through regular supervision and repair/replacement from time to time.</p> <p>c) All power transmission lines whether cladded or sufficiently covered are potential hazardous at construction sites.</p> <p>d) Electrical cables and wires will be properly arranged with proper electrical safety. Loose electrical connections will not be allowed at the work site or in the camp/plant site.</p> <p>e) All three phase motors, electrical panels and electrical machines, DG set etc. will be provided double earthing with proper earth pits as per applicable IS code.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		<p>f) Red danger sign with bone & skull will be displayed as per the Electrical Rules at three phase motors, electrical panels and electrical machines, DG set, etc.</p> <p>g) Contractor shall take all required precautions to prevent danger from electrical cables, wires and equipment and ensure that:</p> <ul style="list-style-type: none"> • No construction material will be stacked or placed below/near power transmission lines, wires and equipment, which can be potential danger to any workman or public. • All such electrical installations and wirings shall be barricaded in manner that ensures safety of the workers, operating vehicles/ equipment and other users of the premises. • Necessary fencing, illumination and proper insulation of the electrical lines shall be ensured by the Contractor for safety and security. • The Contractor shall ensure proper maintenance of electrical supply lines/ points. • All such electrical operating units shall be switched off before operation is closed every day or night as the case may be.
20.	Measures for prevention of pollution	<p>a) All precautionary measures for prevention of pollution on account of the construction work (including both on-site and off areas) shall be implemented as per the requirements/standards of CPCB, SPCB and in line with measures listed in this EMP.</p> <p>b) Contractor will chose/select a material source after assessment of the availability of sufficient materials, quality and compliance to environmental regulatory requirements.</p> <p>c) Requirements for establishing and operating a batching plant shall comply with requirement of the relevant legislations. Necessary Consent to Establish (CTE), Consent to Operate (CTO) and Hazardous Waste Authorization (as applicable) will be obtained from State Pollution Control Board (SPCB), as required.</p> <p>d) The conditions imposed in CTE, CTO and/or Hazardous Waste Authorization will be strictly complied by the Contractor. The discharge standards promulgated under the Environment Protection Act, 1986 will be strictly adhered to.</p> <p>e) Vehicles, equipment and machinery for construction will confirm to relevant Bureau of Indian Standard (BIS)/CPCB standards.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		f) Contractor will ensure that all vehicles, equipment and machinery used for construction work are regularly maintained and in good working condition. The Contractor will submit PUC certificates for all vehicles/equipment/ machinery used for the project.
21.	Air Pollution	<p>a) Wind barriers or screens shall be provided between the building to be constructed and the offices/buildings located behind to avoid/minimize impact from fugitive dust emissions.</p> <p>b) The Contractor will take every precaution to reduce the level of dust and gaseous pollution from the work site/s. Measures to reduce the level of dust (PM 2.5 and PM 10) will be taken and the Contractor will make arrangements to minimize dust pollution through provision of wind screens/barriers, water sprinkling/mist fine spray arrangement and encapsulation of dust source (as required) shall be made.</p> <p>c) During all dust generating operations, levels will be contained as per Central/State Pollution Control Board norms.</p> <p>d) DG set will be provided with vertical opening chimney of adequate height as per CPCB guidelines (Height of stack in meter = Height of the building + 0.2 $\sqrt{\text{KVA}}$).</p> <p>e) Ensure all tipper trucks are loaded only up to permitted capacities and adequately covered with wetted cloth, so that en-route dust and spills are avoided. Alternatively, water resistant tarpaulins can also be used to cover trucks.</p> <p>f) Screens of hessian cloth, agro-net and such other barricading materials will be erected along dumped and stock piled sites, so that generation of dust can be minimized to a great extent.</p>
22.	Water pollution	<p>a) Measures shall be taken to ensure that wastewater from the construction zone/labour camp doesn't contaminate any surface water body or the aquifer.</p> <p>b) Storage of materials like cement etc. shall be done in a manner (with impervious layer on bottom and a covered shed on top) that does not contaminate land and ground/surface water.</p>
23.	Noise Pollution	<p>a) Care shall be taken to reduce the noise as the construction will be carried out close to other functional buildings. All noise causing activities shall be preferably undertaken during non-operational hours (of other buildings).</p> <p>b) Only acoustic enclosures fitted DG set will be allowed at the construction and plant/camp sites.</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		c) Maintenance of equipment and machinery (including proper lubrication, tuning and checks for muffler effectiveness) shall be regular and up to the satisfaction of the Engineer to keep noise level under control.
24.	Disposal of Debris and Wastes	<p>a) Proper provision should be made for the storage and disposal of waste materials and scrap.</p> <p>b) All debris generated during building demolition/construction shall be segregated for reuse (either in this or other works). Residual debris and spoils, if any, shall be disposed in locations which are pre-approved by the Engineer/Employer in a manner that it does not contaminate the environment.</p> <p>c) Waste from building demolition and during construction of new structure shall be segregated at the worksite itself. High visibility signage should be used stating this. Signage indicating different material/waste categories should be placed in the storage/ stacking area (such as Timber Only – Metal Only – Plastics Only – Rubble Only etc.).</p> <p>d) The Contractor will be responsible (including his sub-contractors, if any and suppliers) for the cleaning up and disposal of all their waste products. This will include all waste materials not incorporated/mentioned in the body of the works and is also deemed to include any packaging, wrapping or crates in which the materials may have been delivered.</p> <p>e) Waste/debris should not be allowed to accumulate on site and never stored along access routes or passageways. Litter and debris ‘trapped’ against site fencing must be regularly cleaned.</p> <p>f) No solid or hazardous wastes (such as oil contaminated waste) will be dumped in drains or in open areas. No wastes shall be disposed off in a manner that may block the flow of water in drains, culverts, channels or affect any water course/body. Harmful or toxic waste should be stored and disposed of in accordance with statutory provisions.</p> <p>g) Used oil generated from vehicles/DG set at plant/camp site will be collected in closed containers and sold to MoEF&CC/SPCB approved used oil recyclers.</p> <p>h) The Contractor is required to set up a system to record and quantify the management of all waste and scrap from the site. The Contractor shall maintain proper records/register at site regarding the type and quantum of salvaged material and debris/wastes from the Building Demolition activity. This register should record the following details for each item disposed of:</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		<ul style="list-style-type: none"> • Type/category of waste - eg. concrete, bricks, tiles, metal, plastic, wood/timber, glass, rubble, excavated spoil, etc. • Quantity of material • Applicable Waste Disposal Procedure/method • Date of Disposal • Name of Scrap Dealer/Agency • Areas/locations where debris/wastes were disposed off with geotagged visual evidences, if applicable (such as for debris to be used for road works) • Initials of person making the entry • Person who verified the documentation • Remarks/Additional Details, if any
25.	Site Rehabilitation and Clean-up	<p>a) After the completion of works and prior to handing over the building for usage, the site has to be cleaned and all waste materials/debris has to be removed and disposed at pre-approved designated locations/sites. The clean-up and restoration operation has to be implemented by the Contractor prior to demobilization.</p> <p>b) The Contractor will clear all temporary structures; remove excess/unused material, dispose all garbage, night soils and waste in an environmentally sound manner.</p> <p>c) All disposal pits/trenches will be filled in and effectively sealed off.</p> <p>d) All work sites and off-site areas used for the project (including construction/labour camp, plant site, material sources etc.) shall be restored/rehabilitated by the Contractor to a better condition (if not at least to its original condition). Construction zone including camp, and any other area used/affected due to the project operation will be left clean and tidy at the Contractor's expense to the entire satisfaction to the Engineer.</p> <p>e) Completion of work (as covered under clause 53 of GCC) will also include rehabilitation and clean-up of the work sites including disposal of debris/construction wastes at pre-approved locations.</p>
26.	Liabilities	<p>a) Measures shall be taken to avoid/minimize inconvenience to Silk Factory workers and users of buildings around the construction site - accordingly they shall be informed through written communication/messages and leaflets.</p> <p>b) Any liability arising out of Contractor's agreement with the landowners/Srinagar Municipal Corporation/local people (including those related to temporary use of land and disposal of debris) shall be settled and certified before closure of the</p>

S.No	Activity/Aspect	Measures to be Taken/Implemented by the Contractor/Supervision by PIU
		work by the Contractor.
27.	Environmental Monitoring and Reporting	<p>a) During the construction phase, the Contractor will carry out environmental monitoring for ambient air quality and noise levels by engaging reputed / approved laboratory.</p> <p>b) The Contractor will be required to submit Monthly Status Reports on EMP compliance covering parameters and points mentioned in the section above.</p>

6.4 ENVIRONMENTAL MONITORING PLAN

Environmental monitoring plan provides the application of EMoP as well as dealing with ad-hoc or unforeseen issues which need to be mitigated. The environmental monitoring plan for the proposed sub-project has been prepared based on the environmental monitoring indicators as shown in **Table 6.2**.

Table 6.2: Environmental Monitoring Indicators

S. No	Indicator	Details	Frequency	Responsibility
I.	Construction Phase			
1.	Ambient Air Quality	24 hourly Ambient Air Quality monitoring for PM2.5, PM10, SO2 and NO2 and CO at Batching Plant and Construction Site	Once in six months	Contractor by engaging NABL approved Environmental Laboratory
2.	Noise Levels	Noise levels (dB) and 24 hourly Leq (dB) at Batching Plant and Building construction site	Once in six months	Contractor by engaging NABL approved Environmental Laboratory
3.	Occupational Health & Safety	Occupational health & Safety of workers engaged in construction activities	Daily	Environment & Safety Officer of the Contractor
II.	Operation Phase			
4.	Building Protection Work and Scour Protection	Monitoring of Building Protection and Scour Protection	During rains	Concern Engineer from JKI&C

6.5 Institutional Arrangements for Implementation of EMP

During implementation of the proposed building construction, PIU (JKI&C) and Contractor will be responsible for ensuring that the environmental management measures as given EMP are implemented and regulatory requirements are met. The building construction contractor will undertake implantation of EMP, which will be part of bid and contract agreement. The institutional arrangement mechanism for the proposed building construction is presented in **Table 6.3**.

Table 6.3: Institutional Arrangement for Proposed sub-project

Implementing/ Monitoring Agency	Designation	Responsibilities
Project Implementation Unit	Project Director	<ul style="list-style-type: none"> • Overall responsible for EMP implementation • Reporting to various stakeholders (World Bank) on status of EMP implementation • Review of the progress made by contractors • Conducting periodic field inspection to insure EMP implementation • Maintaining progress reports on EMP implementation
	Environmental Expert of PIU	<ul style="list-style-type: none"> • Assist the PIU in the implementation of the EMP provisions • Provide guidance to the PIU/contractor on implementation of EMP provisions • Carry out periodic field visits and ensure compliance with the EMP provisions • Assist the PIU in the compilation of the monitoring reports and progress reports on EMP implementation
Contractor	Environment & Safety Officer	<ul style="list-style-type: none"> • Responsible for ensuring the implementation of mitigation measures as per provision in the EMP document. • Obtaining consents and permission for Batching Plant, etc. • Monthly reporting to PIU. • Discussing various environmental & safety issues and environmental mitigation and monitoring actions with all concerned directly or indirectly. • Conducting periodic environmental and safety training for contractor's supervisors and workers along with sensitization on environmental & safety issues that may be arising during the construction stage of the buildings. • To carry out environmental monitoring and

Implementing/ Monitoring Agency	Designation	Responsibilities
		control activities including pollution monitoring. • Conducting awareness campaign for all construction personnel (including labourers, supervisors and engineers) about HIV/AIDS in the construction and labour camps. • Preparing and submitting monthly reports to PIU on status of implementation safeguard measures

6.6 Reporting System

The contractor will follow the reporting system for environmental management measures and environmental management indicators as given in **Table 6.4**. The Contractor will report to the PIU on the progress and status of the implementation of environmental management measures as per the EMP. EMP implementation report will comprise photographic evidences (with date, time and geo reference) for implemented mitigation measures, monitoring reports, etc .

Table 6.4: Reporting System

S.No	Item	Stage	Contractor	PIU
			Implementation & Reporting to PIU	Supervise /Field Compliance Monitoring
1.	Identification of disposal location for demolition wastes from existing buildings	Construction	One Time	One Time
2.	Monthly EMP Implementation Report	Construction	Monthly	Monthly
3.	Pollution Monitoring	Construction	Six Monthly	Six Monthly
4.	Cleaning and Restoration	On completion of construction of buildings	One Time	One Time

The contractor will take all reasonable steps to protect the environment on and off the building construction site and to avoid damage or nuisance to person or to property of the

public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

6.7 Clause for Nonconformity to EMP - Protection of the Environment

The Contractor shall implement necessary mitigation measures as given EMP for which responsibility is assigned to him as stipulated in the EMP. Any lapse in implementing the same will attract the damage clause as detailed below:

- Any complaints of public, within the scope of the Contractor, formally registered with the PIU and communicated to the Contractor, which is not properly addressed within the time period intimated by the PIU shall be treated as a major lapse.
- Non-conformity to any of the mitigation measures stipulated in the EMP Report (other than stated above) shall be considered as a minor lapse.
- On observing any lapses, PIU shall issue a notice to the Contractor, to rectify the same.
- Any minor lapse for which notice was issued and not rectified, first and second reminders shall be given after ten days from the original notice date and first reminder date respectively. Any minor lapse, which is not rectified, shall be treated as a major lapse from the date of issuing the second reminder.
- If a major lapse is not rectified upon receiving the notice PIU shall invoke reduction, in the subsequent interim payment certificate.
- For major lapses, 10% of the interim payment certificate will be withheld, subject to a maximum limit of about 0.5% of the contract value.
- If the lapse is not rectified within one month after withholding the payment, the amount withheld shall be forfeited.

6.8 Budgetary Provisions for Implementation of EMP

The EMP shall be integrated part of the bid/construction contract in the form of technical specifications and environmental performance requirements. The costs to be incurred on implementation of EMP, shall be incidental to the civil works and therefore, no separate environment budget will be provided to the contractor. The contractor will ensure effective implementation of EMP during pre-construction, construction and demobilization phases.

6.9 Budget for EMP Implementation

The environmental budget for the various environmental management measures anticipated for pre construction, construction and operation of the proposed building construction is detailed in Table 6.5. There are several other environmental issues that have been addressed as part of good engineering practices, the costs for which have been accounted for in the engineering cost. The budget for EMP is given in **Table 6.5**.

Table 6.5 - Budget for Implementation of Environmental Management Plan

Component	Stage	Items	Unit	Unit Cost	Quantity	Total Cost
Demolition of devastated Building	Construction Phase	Demolition of devastated building and disposal of demolition wastes	Lumpsum	-	-	500000
Safety of Building	Operation Phase	Safety Signage at the construction site as per Building Construction Guidelines	Cost to be included in DPR			0
Horizontal Seismic Force	Construction Phase	Seismic arrester to be provided to prevent dislocation of slabs of the building	Cost to be included in DPR			0
Air	Construction	Tarpaulin Covers for vehicles transporting, construction material to building construction site	Lumpsum	30000/-	-	30000
Water	Construction	Oil Interceptors at workshop at camp site	Nos	50000/-	1	50000
		Sanitary facilities at construction camp	Nos	40000/-	5	200000
Personal Protective Equipments (PPE's)	Construction	Personal Protective Equipments like vest, helmet, safety shoe, hand gloves, gumboots, earplug, Harness belt, Welding Glasses etc	Lumpsum	-	-	150000
Solid Waste Management	Construction Phase	Solid Wastes collection, segregation and disposal from building construction site and camp	Lumpsum	-	-	40000

Component	Stage	Items	Unit	Unit Cost	Quantity	Total Cost
Hazardous Waste Disposal	Construction Phase	Collection and disposal of used oil from maintenance of DG set and construction equipment	Nos	10000/-	2	20000
First Aid Boxes	Construction Phase	First Aide boxes at the construction site, camp and batching plant	Lumpsum	2000/-	6	12000
Monitoring	Construction Phase	Monitoring of air quality and noise level, water quality	Lumpsum	-	-	200000
		Total				12,02,000

Environment and Social Screening Checklist

Part A: General Information

1. Name of the sub-project	Construction of Composite Market Centre for Whole Chain of Silk activity in Govt. Silk Factory Rajbagh, Srinagar.	
2. Type of proposed activity (tick the applicable option and provide details)		
▪ Road		-
▪ Bridge		-
▪ Fire Station		-
▪ Hospital/Health Facility		-
▪ Educational Institute		-
▪ Building for Livelihoods	√	Composite Market Centre for Whole Chain of Silk activity in Govt. Silk Factory Rajbagh, Srinagar.
▪ Flood Infrastructure Related		-
▪ Other Public Building		-
▪ Any Other (Please Specify)		-
3. Location of the proposed sub-project		
▪ Name of the Region	Kashmir (J&K State)	
▪ Name of the District	Srinagar	
▪ Name of the Block	Amira Kadal	
▪ Name of the Settlement	Rajbagh	

▪ Latitude	34°06'96.4"N
▪ Longitude	74°81'73.2"E
4a. Proposed Nature of Work (tick the applicable options)	
▪ Minor Repairs	-
▪ Major Repairs/Rehabilitation	-
▪ Upgrading/Major Improvement	-
▪ Expansion of the facility	-
▪ New Construction	√
▪ Any Other	-
4b. Size of the sub-project (approx. area in sq. mt/hac or length in mt/km, as relevant)	-
5. Land Requirement (in hac./sq.mt.)	
▪ Total Requirement	Nil
▪ Private Land	Nil
▪ Govt. Land	Nil
▪ Forest Land	Nil
6. Implementing Agency Details (sub-project level)	
▪ Name of the Department/Agency	J&K Handicrafts Department
▪ Name of the contact person	Mr Mai Javid
▪ Designation	Managing Director J&K Industries
▪ Contact Number	+91-9419003904
▪ E-mail Id	javidjki@yahool.com
7. Screening Exercise Details	
▪ Date on which it was carried out	25/05/2017

▪ Name of the Person	Yadullah Shah
▪ Contact Number	+91-9622672672
▪ E-mail Id	yaadshah@gmail.com

Part B (1) Environment Screening

Question	Yes	No	Details
1. Is the sub-project located in whole or part within 1 km of the following environmentally sensitive areas?			
a. Biosphere Reserve		No	-
b. National Park		No	Dachigam National Park is 23 Kms far from the sub-project site
c. Wildlife/Bird Sanctuary		No	-
d. Wildlife/Bird Reserve		No	-
e. Important Bird Areas (IBAs)		No	-
f. Habitat of migratory birds (outside protected areas)		No	-
g. Breeding/Foraging/Migratory route of Wild Animals (outside protected areas)		No	-
h. Area with threatened/rare/ endangered fauna (outside protected areas)		No	-
i. Area with threatened/rare/ endangered flora (outside protected areas)		No	-
j. Reserved/Protected Forest		No	-
k. Other category of Forest		No	-
l. Wetland		No	Hokersar wetland is 20 Kms far from sub-project site

m. Natural Lakes		No	Dal lake is 04 Kms far from sub-project site
n. Rivers/Streams		No	River Jhelum is 900 (m) far from sub-project site.
Question	Yes	No	Details
o. Swamps/Mudflats		No	-
p. Zoological Park		No	-
q. Botanical Garden		No	Botanical garden is 10 Kms far from sub-project site
4. Is the sub-project located in whole or part within 500 mts. of any of the following sensitive features?			
a. World Heritage Sites		No	Old building of Silk Factory but not declared heritage
b. Archaeological monuments/sites (under ASI's central/state list)		No	
c. Historic Places/Monuments/Buildings/Other Assets (not listed under ASI list but considered locally important or carry a sentimental value)		No	Shrine of Hazrat Sheikh Abdul Qadir Jeelani (RA) is located 4 Kms far from sub-project site. Hanuman Temple is located 5 Kms far from sub-project site.
d. Religious Places (regionally or locally important)		No	Shrine of Hazrat Sheikh Abdul Qadir Jeelani (RA) is located 4 Kms far from sub-project site. Hanuman Temple is located 5 Kms far from sub-project site.
e. Reservoirs/Dams		No	-
f. Canals		No	Flood Spell Channel is 3 Kms far from sub-project site

g. Public Water Supply Areas from Rivers/Surface Water Bodies/Ground Water Sources		No	-
4. What is the High Flood Level in the sub-project area?	-		
5. Is any scheduled/protected tree like Chinara, Mulberry or Deodar likely to be affected/cut due to the project?		No	-
6. Is the sub-project located in a landslide/heavy erosion prone area or affected by such a problem?		No	-
7. Is sub-project located in an area that faces water paucity or water quality issues?		No	-

Part B (2) : Result/Outcome of Environmental Screening Exercise

1.	Environment Impact Assessment Required	No
2.	Environment Clearance Required	No
3.	Forest land Clearance/Diversion Required	No
4.	Tree Cutting Permission Required	No
5.	ASI (Centre/State) Permission Required	No
6.	Permission from ULB/Local Body/Department Required	No
		SMC Permission required for building construction
7.	Any other clearance/permission required	Yes

		<p>Consent to Establish (CTE) and Consent to Operate (CTO) from SPCB will be required for Stone Crushers. PUC's and other fitness certificates of equipments etc are required on site.</p> <p>Construction material will be procured only from permitted sites and licensed /authorized quarries.</p>
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Part (1) Social Screening

1. Does the sub-project activity require acquisition of land?			
Yes		No	√
Give the following details:	Private Land (sq mts/hac.)		-
	Govt. Land (sq mts/hac.)		-
	Forest Land (sq mts/hac.)		-
2. Does the proposed sub-project activity result in demolition/removal of existing structures?			
Yes	-	No	√
If so, give the following details:			
▪ Number of public structures/buildings			-
▪ Number of common property resources (such as religious/cultural/ drinking water/wells/etc.)			-
▪ Number of private structures (located on private or public land)			-

3. Does the proposed project activity result in loss of crops/trees?			
Yes		No	√
4. Does the proposed Project activity result in loss of direct livelihood/ employment?			
Yes		No	√
5. Does the proposed activity result in loss of community forest/pastures on which nearby residents/local population are dependent?			
Yes		No	√
If yes, give the details of the extent of area to be lost (in acres/hac).		-	
6. Does the proposed Project activity affect scheduled tribe/caste communities?			
Yes		No	√

Part C (2): Result/Outcome of Social Screening Exercise

S.No.	Result/Outcome	Outcome
1.	Answer to all the questions is 'No' and only forest land is being acquired	No SIA/RAP required
2.	Answer to any question is 'Yes' and the sub-project does not affect more than 200 people (i.e. either complete or partial loss of assets and/or livelihood)	Abbreviated RAP is required
3.	Answer to any question is 'Yes' and the sub-project affects more than 200 people (i.e. either complete or partial loss of assets and/or livelihood)	SIA/RAP Required

Outcome: No Detailed Environment and Social Assessment is required.

Annexure 2

Name of the Sub Project: Silk factory Rajbagh
 Location: Rajbagh
 Date: 25/05/17 Time: 2:30 pm.

S.No	Name	Address	Occupation	Signature
1	M. Masood Ali	Shabalpora	weaver	[Signature]
2	U. Mehdi Ali	Nindgam	weaver	[Signature]
3	G. Mohd Ali	Uralpora	-	[Signature]
4	M. Rashid Ali	Indgam	-	[Signature]
5	M. Farhan Ali	Boyo	"	[Signature]
6	G. Ahmad Ali	Konitpora	weaver	[Signature]
7	M. Shafi Hyder	Bachwala	Baibor	[Signature]
8	M. Ghani Ali	Dalgate	Carpenter	[Signature]
9	Sameer M.	Natipora	Employee	[Signature]
10	Rafiq A.	Chamapora	Housewife	[Signature]
11	Nazim	Batmaloo	Govt Employee	[Signature]
12	Nahida	Balsulle	Student	[Signature]
13	Shahida	Noukhalan	Student	[Signature]
14	Akmal	Dalgate	Consultant	[Signature]
15	Soulan Khan	Laljan	Driver	[Signature]
16	M. Rafiq	Dalgate	Shopkeeper	[Signature]
17	M. Basit	Rajbagh	Govt. Employee	[Signature]
18	Rahi	Rambagh	Student	[Signature]
19	Saman Khan	Rambagh	Student	[Signature]
20	Jawad	Solima	Student	[Signature]
21	Jawhala	Pallyapora	Student	[Signature]

Name of the Sub Project: *Silk Factory Rajbagh*
 Location: *Rajbagh*
 Date: *25/05/14* Time: *2:15 pm*

S.No	Name	Address	Occupation	Signature
1	M. Afzal	Kic Munda	Dyer Silk Factory	[Signature]
2	Mansoor Ali	Changpora	Accounts Officer	[Signature]
3	Mishal Ali Khan	Fateh Mandi	Truck Driver	[Signature]
4	Ab. Hamid Sheikh	Wanohra	Dr. Lites Officer	[Signature]
5	Mansoor Ali Khan	Buzulla	Police Station	[Signature]
6	Ab. Kasim Khan	Pitha	Handloom	[Signature]
7	Moh. Noor	rookpore	Teacher	[Signature]
8	Masood	Kapthamulla	-	[Signature]
9	Shafiq	Wathora	Reverend	[Signature]
10	M. Saif. Shah	Mattipora	Industry Worker	[Signature]
11	Masood A	Lazgi	Industry Worker	[Signature]
12	Javed Ahmad	Shoolbagh	Industry Worker	[Signature]
13	Moh. Rafiq	Manabangan	Teacher	[Signature]
14	Farhat Ali Khan	Dalgate	-	[Signature]
15	Ab. Qasim Khan	Mattipora	Teacher	[Signature]
16	Ab. Saif. Shah	Malkala	-	[Signature]
17	Shahid Ali Khan	Haji Wain	Industry Worker	[Signature]
18	Salim	Mattipora	Handloom	[Signature]
19	Dilshada	Dalgate	Reverend	[Signature]
20	Masood	-	-	[Signature]
21	Shifa	Kashimulla	-	[Signature]