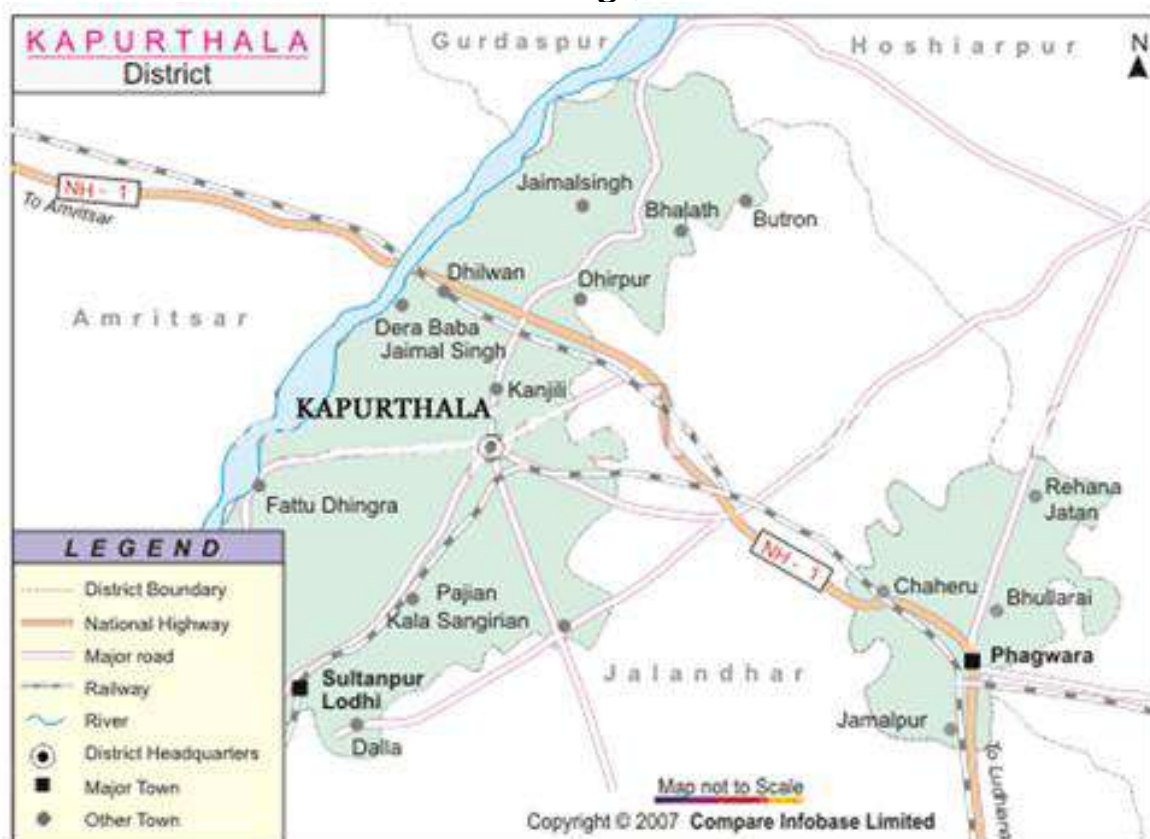


DISTRICT SURVEY REPORT FOR MINOR MINERALS OF KAPURTHALA DISTRICT, PUNJAB

(As per Notification No. S.O.3611 (E) dated 25th July 2018,
Sustainable Sand Mining Management Guidelines, 2016 and
Enforcement & Monitoring Guidelines for Sand Mining (EMGSM)
January 2020, issued by Ministry of Environment, Forest and Climate
Change)



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Preface

This District Survey Report for mining of minor minerals has been prepared in compliance with the decision taken on the subject in a review meeting held on 29.04.2022 under the Chairmanship of worthy Chief Secretary Punjab in which it was decided that a DSR should be prepared for the guidance of all District Level Committees and their appointed consultants for the preparation of their respective DSRs. The Model DSR has been prepared in conformity with Notification No. S.O.3611 (E) dated 25th of July 2018, issued by the Ministry of Environment, Forest and Climate Change (MoEF & CC), Sustainable Sand Mining Management Guidelines, 2016, and Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020, issued by the MoEF & CC.

Ministry of Environment, Forest and Climate Change published Notification No. 3611 (E), dt.25th July 2018 regarding the inclusion of Minerals other than Sand and the format for preparation of the DSR has been specified therein. Further, Sustainable Sand Mining Guidelines (SSMG), 2016 and Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020 were issued by the Ministry of Environment, Forest and Climate Change in compliance of various orders/directions issued by the Hon'ble Supreme Court and Hon'ble NGT and also based on the reports submitted by various expert committees and investigation teams. This DSR has been prepared in conformity with the SO 3611 (E), and other sand mining guidelines published by MOEF & CC from time to time.

The purpose of DSR is to identify the mineral potential areas where mining can be allowed and also those areas where mining cannot be permitted due to proximity to infrastructure such as roads, bridges, railway lines, canals, etc., areas of erosion, areas of environmental sensitivities, etc. The DSR would also help to estimate the permissible annual extractable quantities of minor minerals based on the extent of available deposits, the annual rate of replenishment/depletion wherever applicable, and allow time for replenishment

The DSR of Kapurthala District also describes the general geographical profile of the district, distribution of natural resources, livelihood, climatic condition and sources of revenue generation.



1 Introduction

1.1 Background and General information

1.1.1 Background

Whilst sand is a vitally important and essential requirement for all construction work and several other industries, its injudicious mining can lead to severe environmental problems. The deleterious effects of indiscriminate sand mining include the following:

- a) Extraction of bed material in excess of replenishment by transport from upstream causes the bed to lower (degrade) upstream and downstream of the site of removal.
- b) In-stream habitat is impacted by the increase in river gradient, suspended load, sediment transport, and sediment deposition. Excessive sediment deposition for replenishment increases turbidity which prevents penetration of light required for photosynthesis and reduces food availability of aquatic fauna.
- c) Riparian habitat including a vegetative cover on and adjacent to the riverbanks controls erosion, provides nutrient inputs into the stream, and prevents intrusion of pollutants in the stream through runoff. Bank erosion and change of morphology of the river can destroy the riparian vegetative cover.
- d) Bed degradation is responsible for channel shifting, causing loss of properties and degradation of the landscape; it can also undermine bridge supports, pipelines or other structures.
- e) Degradation may change the morphology of the riverbed.
- f) Lowering of the water table can destroy riparian vegetation.
- g) Excessive pumping of ground water in the process of mining in abandoned channels depletes ground water causing scarcity of irrigation and drinking water.
- h) Un-scientific and unregulated sand mining tends to increase channel bank scouring and erosion. This causes a large degree of meandering of rivers.
- i) Rapid bed degradation may induce bank collapse and erosion by increasing the heights of banks.



- j) Polluting ground water by reducing the thickness of the filter material especially if mining is taking place at top of recharge fissures.
- k) Choking of the sand layer which acts as a filter for ingress of ground water from the river by dumping of finer material, compaction of filter zone due to movement of heavy vehicles. It also reduces the permeability and porosity of the filter material.
- l) Removal of sand from bars may cause downstream bars to erode if they subsequently receive less bed material than is carried downstream from them by fluvial transport.
- m) Ecological effects on bird nesting, fish migration, angling, etc.
- n) Indiscrete mining activities lead to increased concentration of suspended sediments in the river which in turn causes siltation of water resources projects.
- o) Un-scientific and unregulated sand mining lead to severe health hazards like air quality degradation and dust fog.
- p) Direct destruction from heavy equipment operation; discharges from equipment and refueling.
- q) Biosecurity and pest risks.

1.1.2 General Information

The District Survey Report of Kapurthala District has been prepared as per the guide line of Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India vides Notification S.O.-1533(E) dated 14th Sept, 2006 and subsequent MoEF & CC Notification S.O. 141(E) dated 15th Jan, 2016. This report shall guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. Further, MoEF & CC published a notification S.O. 3611(E) Dated 25th July, 2018 and recommended the format for District Survey Report.

The main objective of DSR is to identify the areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and estimation of annual rate of replenishment and allowing time for replenishment after mining in that area. The DSR would also help to calculate the annual rate of replenishment wherever applicable and allow time for replenishment. Besides the sand mining, the DSR also include the potential development scope of in-situ minor minerals.



The objectives of the District Survey Report are as following:

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand Mining in the district, identification of site-specific end-use consumers and reduction in demand & supply gaps.
3. Use of information technology (IT) & latest scientific method of mining for surveillance of the sand mining at each step.
4. District Survey report shall enable appraisal and grant Environmental Clearance for cluster of Sand Mines. It shall assist concern Department during post Environmental Clearance Monitoring.
5. To check and control the instance of illegal mining.
6. To control the flood in the area.
7. To maintain the livelihood of aquatic habitat.
8. To protect the incursion of ground water in the area. Limiting extraction of material in floodplains to an elevation above the water table generally disturbs more surface area than allowing extraction of material below the water table.
9. To keep accumulated data records viz. details of Mineral Resource, potential area, lease, approved mining plan, co-ordinates of a district at one place.
10. To maintain the records of revenue generation.

The following principles are to be kept in view whilst identifying the areas and extent of mining leases:

- i. In-stream extraction of RBM from below the water level of a stream generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the water level.
- ii. In-stream extraction of RBM below the deepest part of the channel generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the thalweg.
- iii. Excavating sand from a small straight channel with a narrow floodplain generally will have a greater impact on the natural hydrologic processes than excavations on a braided channel with a wide floodplain.
- iv. Extracting sand from a large river or stream will generally create less impact than extracting the same amount of material from a smaller river or stream.

The District Survey report (DSR) is comprised of secondary data published and endorsed by various departments and websites about geology of the area,



mineral resources, climate, topography, land form, forest, rivers, soil, agriculture, road, transportation, irrigation etc. Data on lease and mining activities in the district, revenue etc. are collected and collated from concern district Head Quarter.

The Deputy Commissioner through its vide letter no. 3528-32/MA, dated 08.05.2022 had constituted the sub-divisional committee to prepare the District Survey Report. List of the members of the sub-divisional Committee is shown below:

Structure of the Sub Divisional Committee Constituted for preparation of the District Survey Report for Sand minerals of District Kapurthala

1. For Kapurthala Sub- Division

- a) Sub- Division Magistrate Kapurthala- Chairperson
- b) Environment Engineer/XEN PPCB, Jalandhar- Member
- c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) - Member
- d) Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member
- e) Executive Engineer, Jalandhar Drainage Division Jalandhar- Member
- f) Divisional Forest Officer, Phillaur Jalandhar- Member
- g) Chief Agriculture Officer, Kapurthala- Member
- h) All Block Development and Panchayat Officer, Kapurthala- Member
- i) District Mining Officer, Kapurthala- Member Secretary

2. For Sultanpur Lodhi Sub- Division

- a) Sub- Division Magistrate Sultanpur Lodhi - Chairperson
- b) Environment Engineer/XEN PPCB, Jalandhar - Member
- c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) - Member
- d) Executive Engineer, Const. Div. No. 2, PWD (B &R), Kapurthala- Member
- e) Executive Engineer, Jalandhar Drainage Division Jalandhar - Member
- f) Divisional Forest Officer, Phillaur Jalandhar - Member
- g) Chief Agriculture Officer, Kapurthala - Member
- h) All Block Development and Panchayat Officer, Sultanpur Lodhi - Member
- i) District Mining Officer, Kapurthala - Member Secretary

3. For Bholath Sub- Division

- a) Sub- Division Magistrate Bholath- Chairperson
- b) Environment Engineer/XEN PPCB, Jalandhar - Member
- c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) - Member
- d) Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member
- e) Executive Engineer, Jalandhar Drainage Division Jalandhar - Member
- f) Divisional Forest Officer, Phillaur Jalandhar - Member
- g) Chief Agriculture Officer, Kapurthala - Member
- h) All Block Development and Panchayat Officer, Bholath - Member
- i) District Mining Officer, Kapurthala - Member Secretary



4. For Phagwara Sub- Division

- a) Sub- Division Magistrate Phagwara - Chairperson
- b) Environment Engineer/XEN PPCB, Jalandhar - Member
- c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) - Member
- d) Executive Engineer, Const. Div. No. 2, PWD (B &R), Kapurthala- Member
- e) Executive Engineer, Jalandhar Drainage Division Jalandhar - Member
- f) Divisional Forest Officer, Phillaur Jalandhar - Member
- g) Chief Agriculture Officer, Kapurthala - Member
- h) All Block Development and Panchayat Officer, Phagwara - Member
- i) District Mining Officer, Kapurthala - Member Secretary

1.2 Statutory Framework

a. Evolution of the Environmental Regulatory Framework:

Ministry of Environment, Forest and Climate Change (MoEF & CC) has published several notifications time to time to formulate and implement the District Survey Report (DSR) for every district. Statutory Framework and its legal aspect with respect to DSR are tabulated in Table 2.1.

Table 1.1: Requirement of District Survey Report & its year wise modification of Guidelines

Year	Particulars
1994	The Ministry of Environment, Forest & Climate Change (MoEF&CC) published Environmental Impact Assessment Notification 1994 which is only applicable for the Major Minerals more than 5 ha.
2006	In order to cover the minor minerals also into the preview of EIA, the MoEF&CC issued EIA Notification SO 1533 (E), dated 14th September 2006, made mandatory to obtain environmental clearance for both Major & Minor Mineral more than 5 Ha.
2012	Further, Hon'ble Supreme Court wide order dated the 27th February, 2012 in I.A. No.12- 13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., ordered that "leases of minor minerals including their renewal for an area of less than five hectares be granted by the States/Union Territories only after getting environmental clearance from MoEF"; and Hon'ble National Green Tribunal, order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for



Year	Particulars
	minor Minerals.
2016	The MoEF&CC in compliance of above Hon'ble Supreme Court's and NGT'S order has prepared "Sustainable Sand Mining Guidelines (SSMG), 2016" in consultation with State governments, detailing the provisions on environmental clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District survey report and proper monitoring of minor mineral. There by issued Notification dated 15.01.2016 for making certain amendments in the EIA Notification, 2006, and made mandatory to obtain EC for all minor minerals. Provisions have been made for the preparation of District survey report (DSR) of River bed mining and other minor minerals.
2018	MoEF & CC published a notification S.O. 3611(E) Dated 25th July, 2018 and recommended the format for District Survey Report. The notification stated about the objective of DSR i.e. "Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area".
2019	The main objective of Sand Mining Policy, 2019 to ensure that sand mining is done in an environmentally sustainable manner, to ensure availability of adequate quantity of sand, to increase the number of settles to ensure generation of employment.
2020	Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) 2020 has been published modifying Sustainable Sand Mining Guidelines, 2016 by MoEF & CC for effective enforcement of regulatory provisions and their monitoring. The EMGSM 2020 directed the states to carry out river audits, put detailed survey reports of all mining areas online and in the public domain, conduct replenishment studies of river beds, constantly monitor mining with drones, aerial surveys, ground surveys and set up dedicated task forces at district levels. The guidelines also push for online sales and purchase of sand and other riverbed materials to make the process transparent. They

Year	Particulars
	propose night surveillance of mining activity through night-vision drones.
Feb, 2021	Hon'ble NGT vide its orders dated 26.02.2021 in OA No 360 of 2015 has stressed the importance of preparation of scientific DSRs through NABET / QCCI approved consultants and getting the same appraised/approved from SEAC and SEIAA respectively. The orders direct that regular monitoring of all mining leases is to be conducted through a 5-member team headed and coordinated by SEIAAs in each state. The modalities to be followed and penalties to be imposed in cases of illegal mining as also the procedure for periodic review at all levels are also laid down in these important orders of the Hon'ble NGT.
Nov, 2021	Hon'ble Supreme Court of India vide its orders dated 10.11.2021 in Civil Appeal No(s) 3661-62 has partially amended the above orders dated 26.02.2021 of the Hon'ble NGT and directed that fresh DSRs are to be prepared for mining of minor minerals in all Districts by a team of sub-Divisional officers in accordance with the EMGSM 2020 Guidelines of the MOEF&CC and the said DSRs are to be got appraised/approved from SEAC / SEIAA in a time-bound manner of 6 weeks each.
June, 2022	Hon'ble Supreme Court of India vide its orders dated 03.06.2022 in IA No 1000 of 2003 that Each protected forest, that is national park or wildlife sanctuary must have an ESZ of minimum one kilometer measured from the demarcated boundary of such protected forest in which the activities prescribed in the Guidelines of 9th February 2011 shall be strictly adhered to. For Jamua Ramgarh wildlife sanctuary, it shall be 500 meters so far as subsisting activities are concerned.



1.3 Methodology adopted of DSR Preparation

The steps followed during the preparation of District Survey Report are given in Figure 1.1. The individual steps are discussed in following paragraphs.

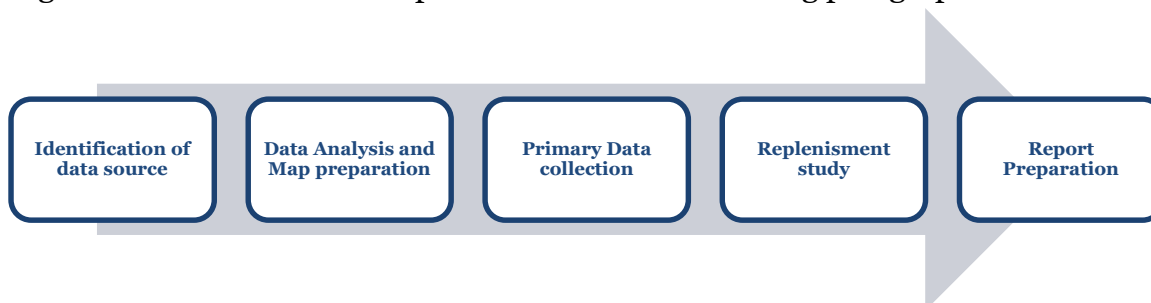


Figure 1.1: Steps followed in preparation of DSR

1.3.1 Data source Identification

District Survey Report has been prepared based on the Primary data base and secondary data base collated from different sources. This is very critical to identify authentic data sources before collating the data set. The secondary data sources which are used in DSR are mostly Government published data based or the published report in reputed journal. District profile has been prepared based on the District Statistical handbook published by Punjab Government as well as District Census 2011. Potential mineral resources have been described based on GSI or any other govt. agencies work done. Mining lease details and the revenue generated from minor minerals has been prepared based on available data from DL&LRO offices of the district. Satellite image has been used for map preparation related to physiography and land utilization pattern of the district.

1.3.2 Data Analysis and Map preparation

Dataset which are captured during the report preparation, are gone through detail analysis work. District Survey Report involves the analytical implication of captured dataset to prepare relevant maps. Methodology adopted for preparation of relevant maps is explained below.

Land Use and Land Cover Map: Land Use and Land Cover classification is a complex process and requires consideration of many factors. The major steps of image classification may include determination of a suitable classification system via Visual Image Interpretation, selection of training samples, Satellite image (FCC-False Color Composite) pre-processing, selection of suitable classification approaches, post-classification processing, and accuracy assessment.

Here LANDSAT 8 satellite Imagery has been taken for Supervised Classification as supervised classification can be much more accurate than unsupervised classification, but depends heavily on the number of training sites, the processing the image, and the spectral distinctness of the classes in broader scale.

The LANDSAT data was applied in band 5,4 and 3 combination for FCC which distinctively shows sand deposits and bare soils in white color and vegetation pattern

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in reddish tone. The Urban settlements and composite man-made structures are in tones of bluish grey to grey. Based on these observations the training set data are utilized for supervised classification. The classes of land use thus obtained provides the LULC map. The LULC class provides the location and area of the region of interest. The FCC map of Kapurthala district is presented on **Figure 1.2**.

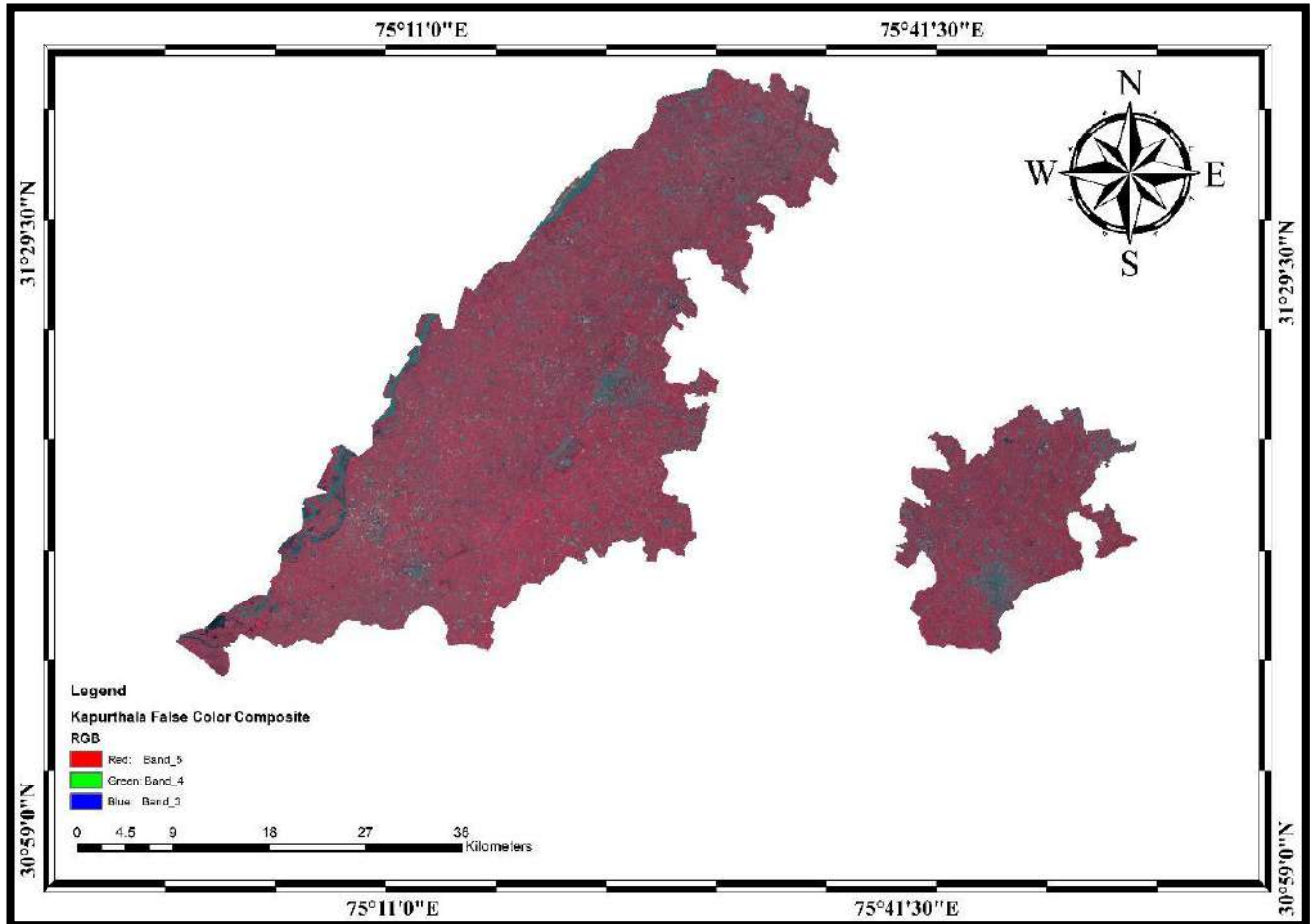
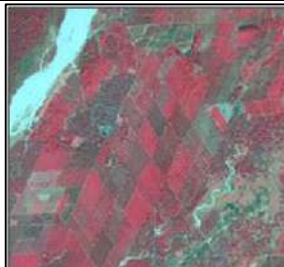
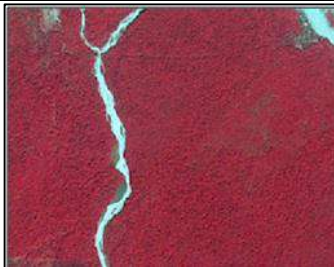


Figure No: 1-2: Landsat 8 data False Color Composite (5 4 3)

(Source: Landsat 8 Earth Explorer (usgs.gov) <https://earthexplorer.usgs.gov>)

	
<p>Agricultural Land - Based on their Geometrical shape, Red and Pink colour tone, Agricultural Land has been identified.</p>	<p>Vegetation Covered Area - Based on their continuous Red colour tone, Vegetation Covered Area has been identified.</p>



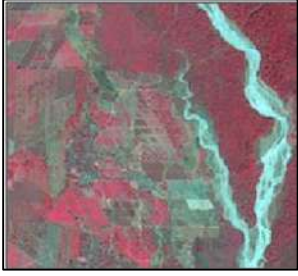
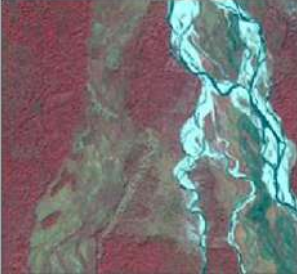

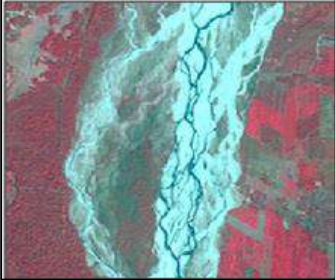
	
<p>Agricultural Fallow Land - Based on their Geometrical shape, Light and dark cyan with light pink colour tone, Agricultural Land has been identified.</p>	<p>Bad Land Topography- Light Yellowish mixed with cyan colour has been identified as Bad Land Topography.</p>
	
<p>Settlement – Area with Cyan Colour including geometrical shape has been recognised as Settlement Area.</p>	<p>Water Bodies – Dark blue colour has been classified as Water Bodies.</p>

Figure 1.3: Pictorial description of Land Use Classification methods

The classified LULC map of Kapurthala region is provided in **Figure 1.4**



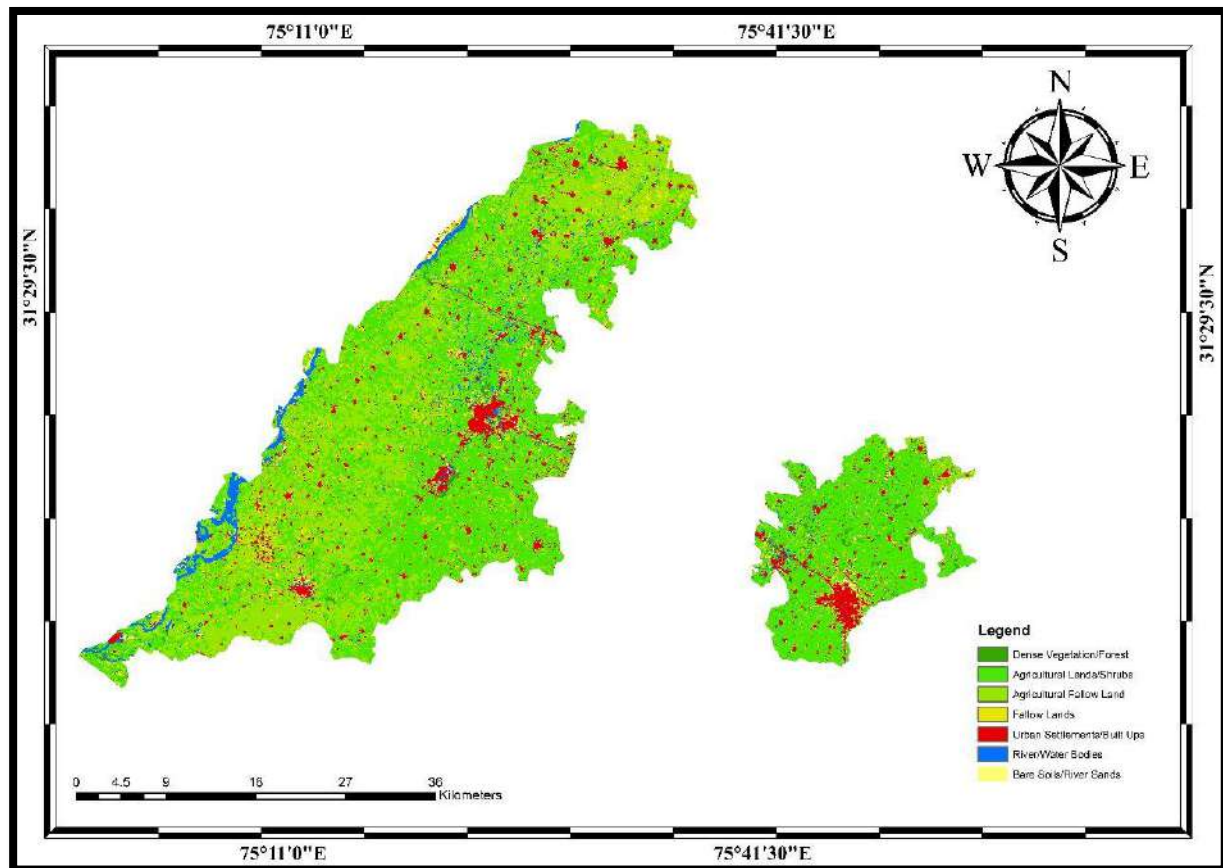


Figure: 1.4: Land Use Land Class map (LULC) of Kapurthala district based on Landsat 8

(Source: Landsat 8 Earth Explore(usgs.gov)<https://earthexplorer.usgs.gov>)

Pictorial descriptions of Geomorphological unit's classification are explained in **Figure 1.5**.

Geomorphological Map:

The major steps of preparing Geomorphological Map is identifying features like – Alluvial Fan, Alluvial Plain, Hilly Region etc. from Satellite Imagery (FCC- False Colour Composite) via Visual Image Interpretation and then digitization has been taken into the consideration to prepare map including all the Geomorphological features according to their location.



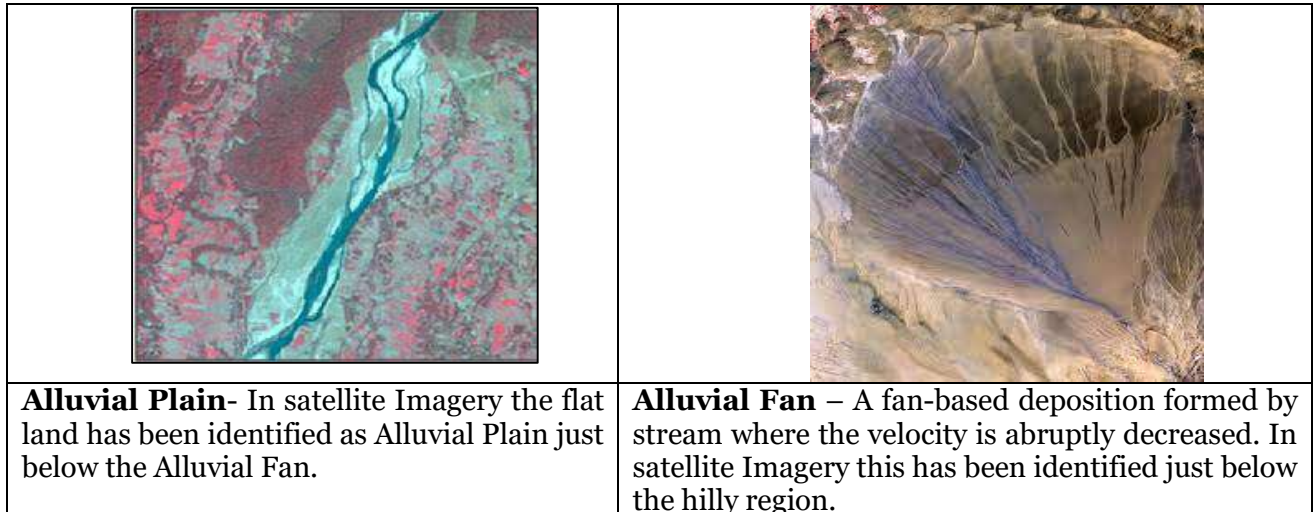


Figure 1.5: Pictorial description of Geomorphological Units Classification methods

Physiographical Map:

The major step of preparing Physiographical Map is generating contour at a specific interval to show the elevation of the area using Cartosat DEM.

The Geomorphological map of the Kapurthala district is presented in the **Figure 1.6**

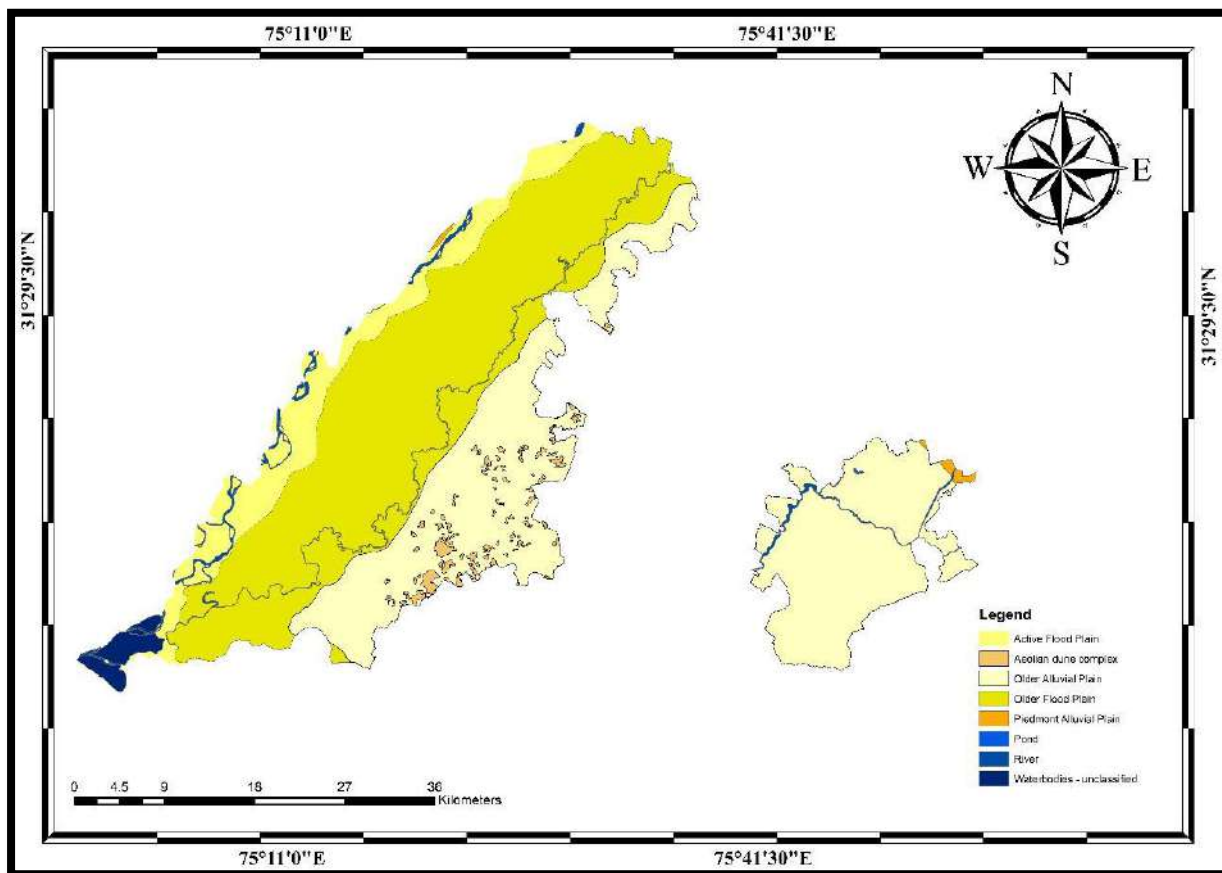


Figure No: 1.6: Geomorphological map of the Kapurthala district
 Source: Bhukosh, GSI, Bhukosh - Geological Survey of India (<https://bhukosh.gsi.gov.in>)

Block Map:

- Raw Data collected from **National Informatics Centre (NIC Website)**.
- Data has been geo-referenced using GIS software.
- Digitization of block boundary, district boundary, state boundary and district headquarter, sub –district headquarter, places, road, railway, river, nala etc.
- Road name, River name, Railway name has been filled in attribute table of the Layers
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Transportation Map:

- Raw Data collected from **National Informatics Centre (NIC Website)**.
- Data has been geo-referenced using GIS software.
- Digitization of block boundary, district boundary, state boundary and district headquarter, sub –district headquarter, places, road, railway, river, nala etc.
- Road name, River name, Railway name has been filled in attribute table of the Layers
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Drainage Map:

- Raw Data collected from **National Informatics Centre (NIC Website)**.
- Data has been geo-referenced using GIS software.
- Digitization of block boundary, district boundary, state boundary and district headquarter, sub –district headquarter, places, road, railway, river, nala etc.
- Road name, River name, Railway name has been filled in attribute table of the Layers
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Seismic Map:

- Raw data collected from **Ministry of Earth Science**.
- Data has been geo-referenced using GIS software.
- Digitization of Earthquake zone and superimposed it over Block Boundary.
- Zone name has been filled in attribute table of the Layers
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Soil Map:

- Raw data collected from **National bureau of soil survey and land use planning**.
- Data has been geo-referenced using GIS software.
- Digitization of Soil classification zone and superimposed it over District Boundary.
- Soil classification has been filled in attribute table of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Wildlife Sanctuary and National Park Location Map:

- Raw data collected from **ENVIS Centre on Wildlife & Protected Areas**.
- Data has been geo-referenced using GIS software.
- Digitization of Wildlife Sanctuary & National Park and superimposed it over Block Boundary.



- Wildlife Sanctuary & National Park name has been filled in attribute table of the Layers

Final layout has been prepared by giving scale, legend, north arrow, etc.

1.3.3 Primary Data Collection

To prepare DSR, capturing primary data or field data has also been carried out in the district. Field study involves assessment of the mineral resources of the district by means of pitting / trenching in specific interval. This provides clear picture of mineral matters characterization and their distribution over the area.

1.3.4 Replenishment study

One of the principal causes of environmental impacts from in-stream mining is the removal of more sediment than the system can replenish. It is therefore need for replenishment study for river bed sand in order to nullify the adverse impacts arising due to excess sand extraction. The annual rate of replenishment carried out on every river of the district to have proper assessment of the sand reserve for mining purposes.

Physical survey has been carried out by GPS/DGPS/Total Station to define the topography, contours and offsets of the riverbed. The surveys clearly depict the important attributes of the stretch of the river and its nearby important civil and other feature of importance. This information will provide the eligible spatial area for mining.

1.3.5 Report Preparation

The district survey report portrays general profile, geomorphology, land use pattern and geology of the district. The report then describes the availability and distribution of riverbed sands and other minor minerals in the district. Apart from delineation the potential mining blocks, the report also includes inventorization of the minerals, recent trends of production of minor minerals and revenue generation there from. Annual replenishment of the riverbed sand has been estimated using field observation, satellite imagery and empirical formula. The road network connecting arterial road to potential mining blocks has been identified. Potential environmental impacts of mining of these minerals, their mitigation measures along with risk assessment and disaster management plan have also been discussed. Finally, the reclamation strategy for already mined out areas is also chalked out.

1.3.6 Demand and Supply of Sand

Sand is a multi-purpose topographical material. It is known as one of the three fundamental ingredients in concrete. The composition of sand is diverse.

The robustness of sand has played a significant role in everyday life. We use sand practically every other day.



Sand extraction from river beds are the main mining activities in the district. With a spurt in construction of real estate sectors and various govt. sponsored projects, the demand for sand has increased manifold.

In the real world, there are a lot of situations where we can find uses/demand of sand. Followings are the common sand uses.

1. While bunging metal, we can mix sand with clay binder for frameworks used in the foundries.
2. Sand can be used for cleaning up oil leak or any spill by dredging sand on that spill. The material will form clumps by soaking up, and we can quickly clean the mess.
3. Sand can be used as a road base which is a protective layer underneath all roads
4. Industrial sand is used to make glass, as foundry sand and as abrasive sand.
5. One creative usage of sand is serving as a candle holder. We can try putting some sand before pouring tea light or any candle in a glass. It holds the candle still and refrain the candle from rolling by giving it an excellent decoration.
6. Adds texture and aesthetic appeal to space.
7. Sand is mostly pure to handle, promptly available and economically wise.
8. We use sand in aquariums, fabricating artificial fringing reefs, and in human-made beaches
9. Sandy soils are ideal for growing crops, fruits and vegetables like watermelon, peaches, peanuts, etc.
10. Sand can light a path by filling mason jars with sand and tea light which is another inexpensive way to make a walkway glow.
11. Sand helps to improve resistance (and thus traffic safety) in icy or snowy conditions.
12. We need sand in the beaches where tides, storms or any form of preconceived changes to the shoreline crumble the first sand.
13. Sand containing silica is used for making glass in the automobile and food industry- even household products for the kitchen.
14. Sand is a strong strand which is used for plaster, mortar, concrete, and asphalt.

Sand extracted from Kapurthala district is used extensively in construction works ranging from individuals to organized corporate and government sectors.



2 Overview of Mining activities in the District

2.1 Overview

Kapurthala district holds a distinct place in the state on account of its strategic geographical location and the availability of minor mineral resources from the bed of Rivers Beas etc.

Mining of sand is being done for a long time and no specific method of exploration is therefore required as the sand, deposited all along the bed is very well exposed on the surface. The replenishment of the excavated minerals takes place each year during the rainy season with the extent of replenishment depending on the intensity of rains in the catchment area as also the extent and characteristics of the catchment area. Adequate quantities of sand are available in reserves of Kapurthala District to meet the consumer demand.

Sand is the main Minor Minerals required for any type of construction (apart from cement and steel). With the increasing population and construction of more pucca-houses instead of the earlier practice of mud dwellings, the demand for sand has been rising inexorably over the last few decades and this trend will continue in the foreseeable future too.

2.2 Mining leases with Location, area and period of validity in Kapurthala District

The list of Mining leases with Location, area, and period of validity in the Kapurthala District is given in Table-2.1

Table 2.1: Existing Mining Leases in Kapurthala District

Sr. No.	Name of Quarry	Location		Area (in ha)	Production (Tonnes)	Validity of EC
		Latitudes/ Longitudes				
1	Safderpur	31°21'0.92"N	75°10'17.19"E	4.29	160285	07/09/2025 (5 year)
		31°21'0.98"N	75°10'22.43"E			
		31°20'58.92"N	75°10'22.33"E			
		31°20'58.92"	75°10'24.83"E			
		31°20'53.02"N	75°10'24.58"E			
		31°20'53.13"N	75°10'17.42"E			
2	Mand Gurmukh Singh Wala	31°29'53.70"N	75°17'35.31"E	5.26	170900	Nil
		31°29'53.80"N	75°17'37.88"E			
		31°29'51.82"N	75°17'37.82"E			
		31°29'51.70"N	75°17'40.28"E			
		31°29'44.13"N	75°17'40.37"E			
		31°29'44.08"N	75°17'32.60"E			
		31°29'51.80"N	75°17'32.84"E			
31°29'51.91"N	75°17'35.36"E					



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Sr. No.	Name of Quarry	Location		Area (in ha)	Production (Tonnes)	Validity of EC
		Latitudes/ Longitudes				
3	Mand Raipur Arayyan	31°34'40.41"N	75°22'31.18"E	4.03	181350	Nil
		31°34'40.50"N	75°22'39.80"E			
		31°34'35.65"N	75°22'39.21"E			
		31°34'36.21"N	75°22'26.14"E			
4	Fatehvala	31° 9'58.31"N	75° 3'34 92"E	3.29	74410	Nil
		31° 9'58.13"N	75° 3'33.59"E			
		31°10'0.16"N	75° 3'33 30"E			
		31°10'0 27"N	75° 3'34.64"E			
		31°10'2. 45"N	75° 3'34.20"E			
		31°10'2.36"N	75° 3'32.97"E			
		31°10'3.51"N	75° 3'32 29"E			
		31°10'4.90"N	75° 3'32 10"E			
		31°10'4 87"N	75° 3'31.42"E			
		31°10'9.23" N	75° 3'30.83"E			
		31°10'9.50"N	75° 3'33 07"E			
		31°10'10.41"N	75° 3'32.83"E			
		31°10'10 24"N	75° 3'30 72"E			
		31°10'12.35"N	75° 3'30 28"E			
		31°10'12.50"N	75° 3'31.20"E			
		31°10'14.24"N	75° 3'30.73"E			
31°10'15.41"N	75° 3'40 26"E					
31°10'13.57"N	75° 3'41.36"E					
31°10'12.64"N	75° 3'32. 34"E					
5	Faridpur	31°17'40.309"N to 31°17'8.894"N		3.8	171000	Nil
		75°8'48.376"E to 75°9'9.520"E				
6	Mand Sabk Desal	31.3998697"N	75.1846864"E	4.8	216000	Nil
7	Revised Amritpur Includes Sabk Desal (Desilting Site)	31.3776988"N	75.1662700"E	47.22	749381	NA
8	Mand Rampur	31.5057624"N	75.3005230"E	33.13	649037	NA

(Source: Executive Engineer cum district Mining Officer, Kapurthala)

2.2.1 Details of Royalty or Revenue Received in Last Three Years (In Rs.)

Revenue generated for last 3 years in the district is furnished in Table 2.2.

Table 2.2: District revenue generation from mineral sector

Name of Minerals	2019-2020	2020-2021	2021-2022
Sand	Kapurthala comes under block no. 5 and the royalty regarding sand mines was deposited in the office of nodal officer block no.5 cum DMO Amritsar. Letter has been written to DMO Amritsar to send the detail of royalty received regarding Kapurthala mines.		

(Source: Executive Engineer cum district Mining Officer, Kapurthala)



2.2.2 Details of Production of Sand or Bajri in Last Three Years (In Tonnes)

Last 3- years production of minor mineral of the district is furnished in Table

2.3.

Table 2.3: Details of production of sand as per mine plan in the district

Name of Minerals	2019-2020	2020-2021	2021-2022
Sand	Nil	100966	79536

(Source: Executive Engineer cum district Mining Officer, Kapurthala)

*Quantity of Sand extracted till April 2022



3 Process of Deposition of Sediments in the rivers of the District

3.1 Introduction

Water action is the major agency responsible for erosion, transportation, and deposition of sand and aggregates. Beas River is the source of most of the sand and associated aggregates in the district. The passage of these rivers in the district is initially through sandy rich terrain, where erosion of country rocks and transportation may be high but may not result in high deposition of sand.

Energy, environment, and time are the three factors which determine the process of sediment transportation and deposition by streams. Thus, when insufficient energy is available to transport the existing sediment load (due to reduction in velocity or volume of water), a part of the material can no longer be transported and is hence deposited. Similarly, geomorphological factors such as the configuration or shape of the channel also affect the process of sediment transportation. Uneven surface of the channel checks the velocity and hence causes deposition. The time factor actually operates through a combination of the above two factors. The deposits that are laid down by running water are called alluvial, fluvial or fluvial deposits. They vary greatly in size, shape and mode of origin.

3.2 Annual deposition factor

Annual deposition of riverbed materials depends on various factors, such as process of deposition, mode of sediment transport, sediment transport rate, sedimentation yield of the river.

1. Process of deposition

Deposition is the processes where material being transported by a river is deposited. Deposition occurs when the forces responsible for sediment transportation are no longer sufficient to overcome the forces of gravity and friction, creating a resistance to motion; this is known as the null-point hypothesis. This can be when a river enters a shallow area or towards its mouth where it meets another body of water.

The principle underlying the null point theory is due to the gravitational force; finer sediments remain in the water column for longer durations allowing transportation outside the surf zone to deposit under calmer conditions. The gravitational effect or settling velocity determines the location of deposition for finer sediments, whereas a grain's internal angle of friction determines the deposition of larger grains on a shore profile.



Deposition of non-cohesive sediments: Large-grain sediments transported by either bedload or suspended load will come to rest when there is insufficient bed shear stress and fluid turbulence to keep the sediment moving; with the suspended load this can be some distance as the particles need to fall through the water column.

Deposition of cohesive sediments: The cohesion of sediment occurs with the small grain sizes associated with silts and clays, or particles smaller than 4Φ on the phi scale. If these fine particles remain dispersed in the water column, Stokes law applies to the settling velocity of the individual grains. The face of a clay platelet has a slight negative charge where the edge has a slight positive charge when two platelets come into close proximity with each other the face of one particle and the edge of the other are electro statically attracted, and then have a higher combined mass which leads to quicker deposition through a higher fall velocity.

2. Mode of sediment transport in rivers

Sediment transport in rivers provides a dynamic linkage between flow and channel form. Mainly there are three processes by which sediment load is transported and these are rolling or traction, in which the particle moves along a sedimentary bed but is too heavy to be lifted from it; siltation; and suspension, in which particles remain permanently above the bed, sustained there by the turbulent flow of the water.

Another name for sediment transport is sediment load. The total load includes all particles moving as bedload, suspended load, and wash load.

Bed load: Bedload is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterway. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bedload occurs when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bedload transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bedload. In situations where the flow rate is strong enough, some of the smaller bedload particles can be pushed up into the water column and become suspended.

Suspended load: While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water



column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows.

Wash load: The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable.



4 General Profile of the district

4.1 Profile of the District

Formerly a princely state, the Kapurthala District is one of the sub-Districts forming the Jalandhar Division. This is the only District in the state which is split in to two parts some 32 Kilometers apart. Between the two parts is the territory of Jalandhar District. It is the smallest District in terms of area and population. The district has area of 1,633 Kilometers.

The district which lies between the latitudes of 30 degree 07 minutes 30 second and 31 degree 39 minutes 30 seconds North and longitudes of 75 degree 58 minutes 30 seconds and 75 degree 54 minutes 60 seconds East forms a part of Bist Doab in central Punjab. In the north, it is bound by the District of Hoshiarpur and Gurdaspur, in the west., by the river Beas and District Amritsar in the south by the river Sutlej and Jalandhar and Ferozepur and in the east by Jalandhar and Hoshiarpur Districts. The Phagwara sub-division is surrounded on all sides by Jalandhar District except in the North East where it joins the District of Hoshiarpur. (<https://kapurthala.gov.in/district-profile/>).

District Kapurthala can be divided into two distinct regions namely Kapurthala-Sultanpur Lodhi tract and the regions which comprise Phagwara Tehsil of the District. The total area of the district is 1633 sq. kms. of which 909.09 sq.km is in Tehsil Kapurthala,304.05 sq. kms in Tehsil Phagwara and 451.0 sq kms area in Tehsil Sultanpur Lodhi. The area between the river Beas and Kali Bein is known as BET. The Area south of the Kali Bein is known as “Dohnan” and is sandy.

A location map of Kapurthala District is furnished as Figure 4.1.



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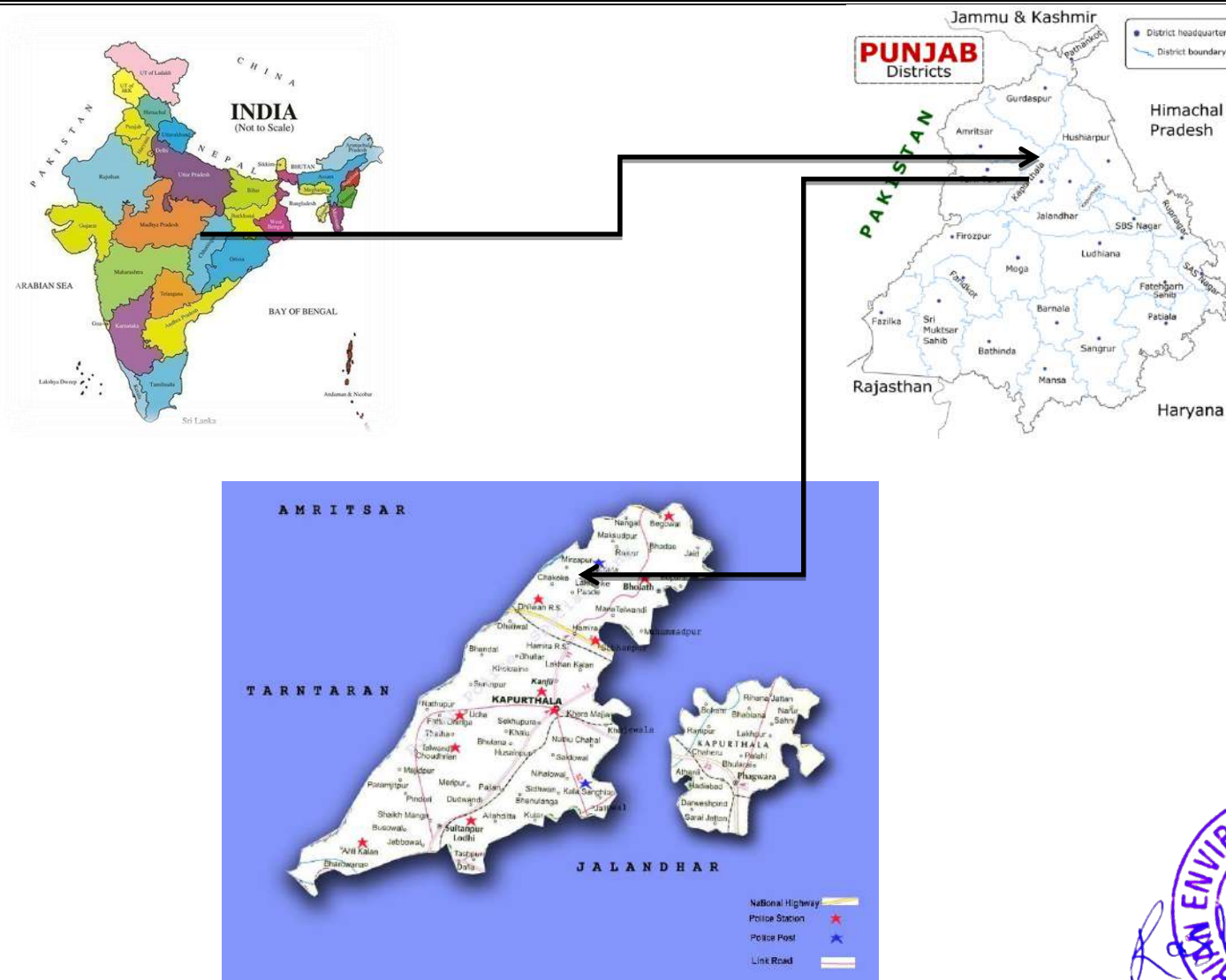


Figure 4.1: Location map of Kapurthala district, Punjab



4.2 Administrative Setup of District

Administratively the District is divided into four Sub-division\Tehsils namely Kapurthala, Sultanpur Lodhi, Bholath and Phagwara. Kapurthala town is the headquarters of the district. There are 688 inhabited villages and 6 towns. The villages are covered by 5 Community Development Blocks with headquarters at Kapurthala, Nadala, Sultanpur Lodhi, Dhilwan and Phagwara.

SUB-DIVISIONS (4)

1. Kapurthala
2. Sultanpur Lodhi
3. Bholath
4. Phagwara

DEVELOPMENT BLOCKS (5)

1. Kapurthala
2. Nadala
3. Sultanpur Lodhi
4. Dhilwan
5. Phagwara

District Kapurthala can be divided into two distinct regions namely Kapurthala-Sultanpur Lodhi tract and the regions which comprise Phagwara Tehsil of the District.

Kapurthala-Sultanpur Lodhi Region: This region comprises the Tehsils of Kapurthala and Sultanpur Lodhi. The major portion of this region lies in the river tract falling between the Beas and Black Bein and is called 'BET'. The area is frequently flooded during the rainy season. A flood protection 'Bund' namely the 'Dhusi Bandh' has been constructed along the left bank of the river Beas and along the Black Bein from Sultanpur Lodhi onwards.

Phagwara Region: The Phagwara region consists of the Sirwal, Dhak and Manjki tracts lying roughly in the North-East, middle and South-East of the tehsils. Sirwal possesses the characteristics of the 'Bet'.

A Block map of Kapurthala District is furnished as Figure 4.2.



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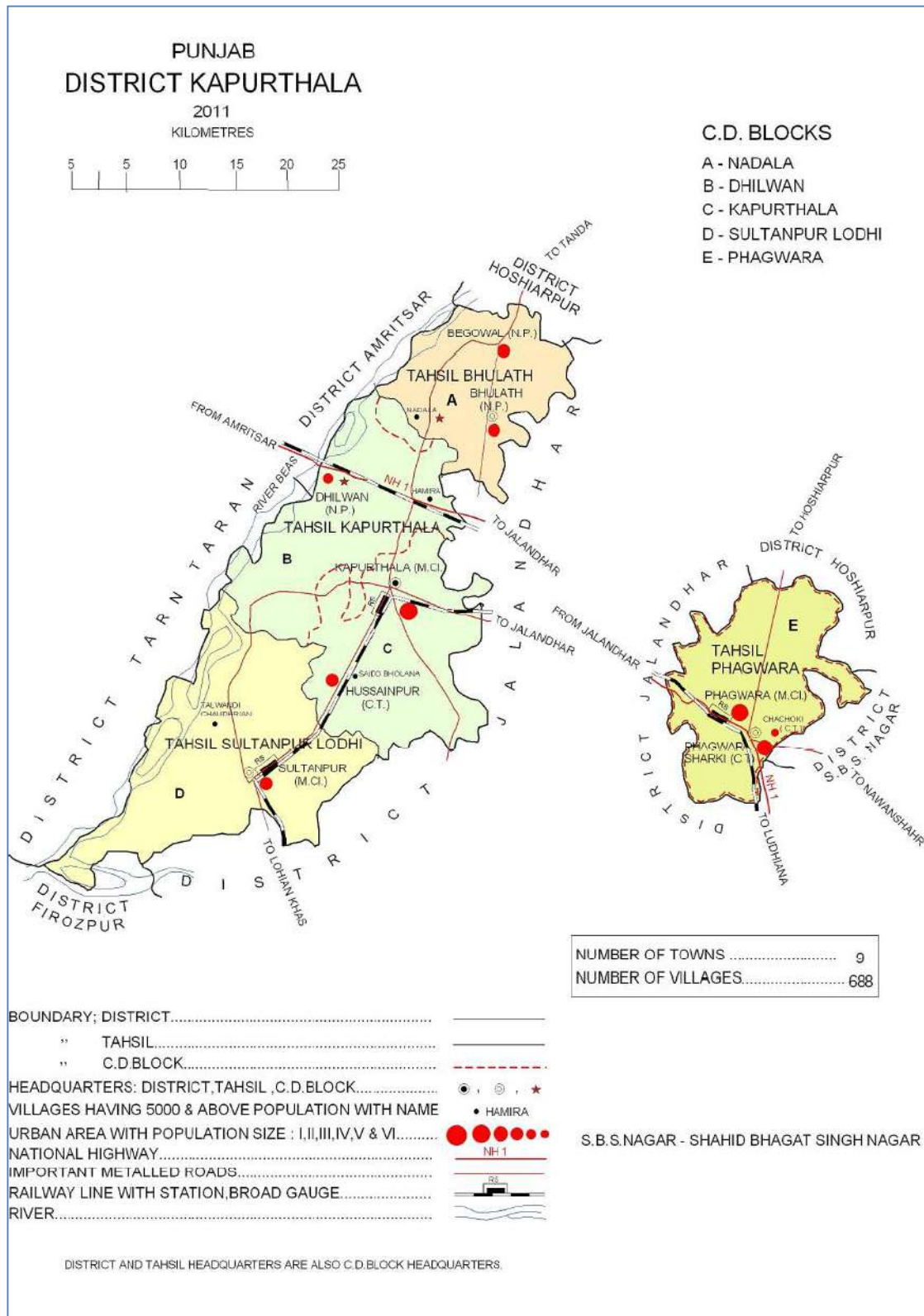


Figure 4.2: Block map of Kapurthala District, Punjab

(Source: Census, 2011)



Detail of Blocks of the District is furnished in Table 4.1.

Table 4.1: Details of Block of Kapurthala District

Block Name	Area (Sq.Km)
Kapurthala	506.54
Nadala	336.29
Sultanpur Lodhi	610.16
Dhilwan	383.78
Phagwara	406.89

(Source: <https://geoiq.io/places/Kapurthala>)

4.3 Land utilization Pattern of the District

The main classes are Built Up land, Agricultural land, forestland, Land under non agriculture use, and water body. The landuse pattern of Kapurthala District, Punjab is given in Table 4.2.

Table 4.2: Land Use details of Kapurthala (2010-2011) Districts

Land Use	Area (Ha.)
Total Area	163000
Forest cover	2000
Barren and uncultivable land	500
Non Agriculture Land	31000
Misc.(Cultivable waste & Fallow Land)	-
Net area sown	134000
Area sown more than once	136000
Total cropped area	270000

(Source: [Brief Industrial Profile of Kapurthala District](#))

4.4 Floods in Punjab

Floods are one of the major natural disasters in the state of Punjab (Figure 4.3). The rivers play an important role in the development of agriculture and the economy of the state. But at the same time, the rivers cause floods and floods cause loss of human life and widespread property damage.

More than five hundred persons have died due to floods in Punjab from 1990 to 2010. The floods affect the northern part of the state more than its southern part. The areas in close proximity of the rivers Ravi, Beas, Sutlej, and Ghagghar are the most vulnerable areas from a flood point of view. Floods occur mostly in the



monsoon season (July- September) on account of heavy rainfall in the catchment area as well as in the plain area of the State.

The major portion of Kapurthala district lies between the Beas River and the Kali-Bein River and is called the 'BET' area. This area is prone to floods. Water logging and alkalinity in the soil is the major problem of the area. A flood protection bundh called 'Dhussi Bundh' has been constructed along the left bank of the Beas River and it has saved the area from the ravages of flood.

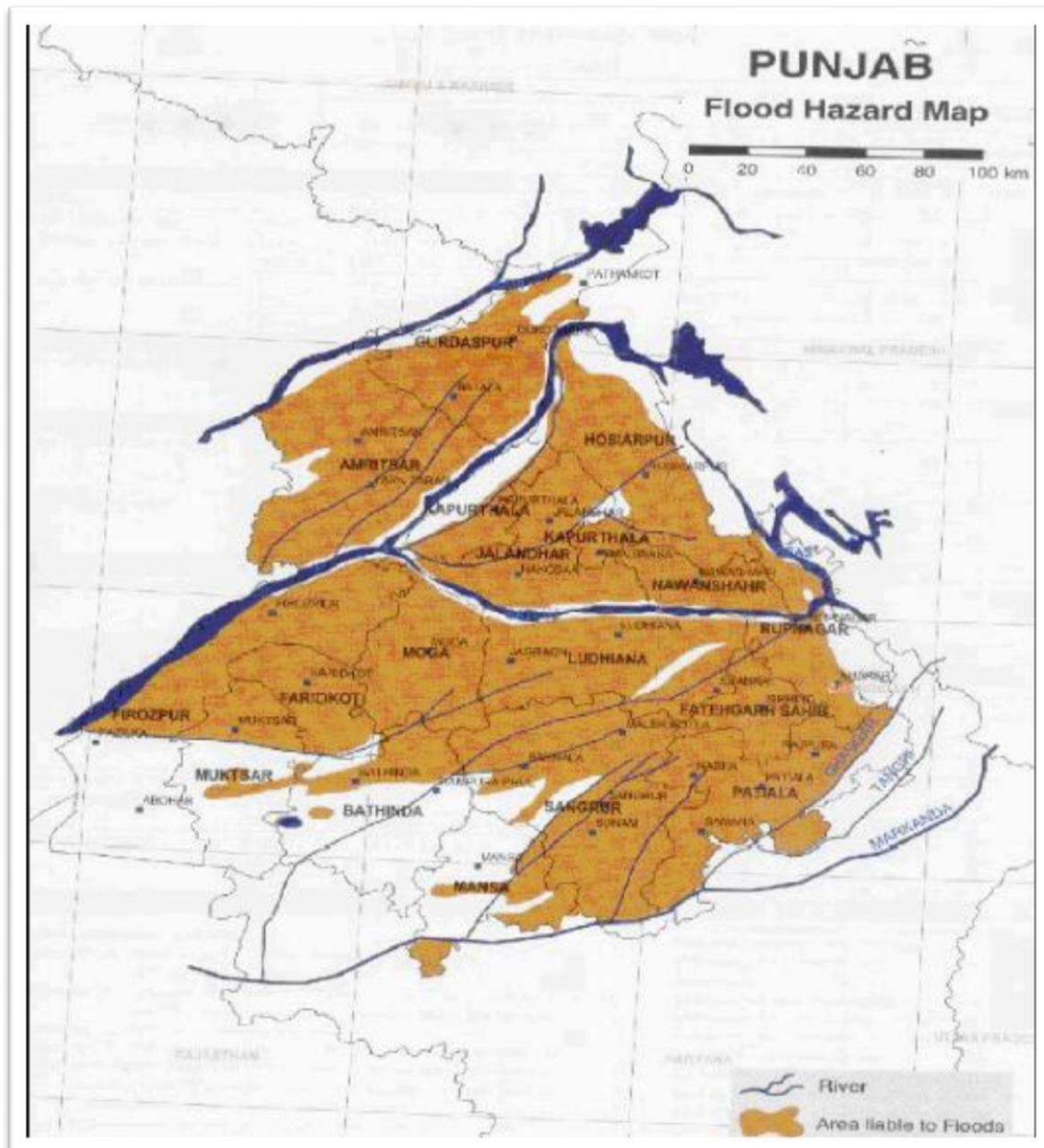


Figure 4.3: Flood Prone districts of Punjab
(Source: http://ijrar.com/upload_issue/ijrar_issue_20543127.pdf)



4.5 Demography

According to 2011 Census, Kapurthala district has a population of 815668 and is comprised of 4,26,311 males and 3,88,857 females. The total rural population is 532706 and the urban population is 282462 and the decennial growth rate is 8.04% (2001-2011). Population density of district is 499 person/sq. km. The child sex ratio in the district (871) is higher than the state child sex ratio (846). It ranks 3rd among the districts in the State. The literacy rate in the district is around 80.2%. It makes ranks 5th among the districts in the State.

Kapurthala is the most populous and Bhulath is the least populous tehsil. Hamira (7,727) in Kapurthala tehsil is the largest village by population size followed by Talwandi Chaudharian (7,217) in Sultanpur Lodhi tehsil. 4 villages in the district are large sized with a population of 5,000 or more.

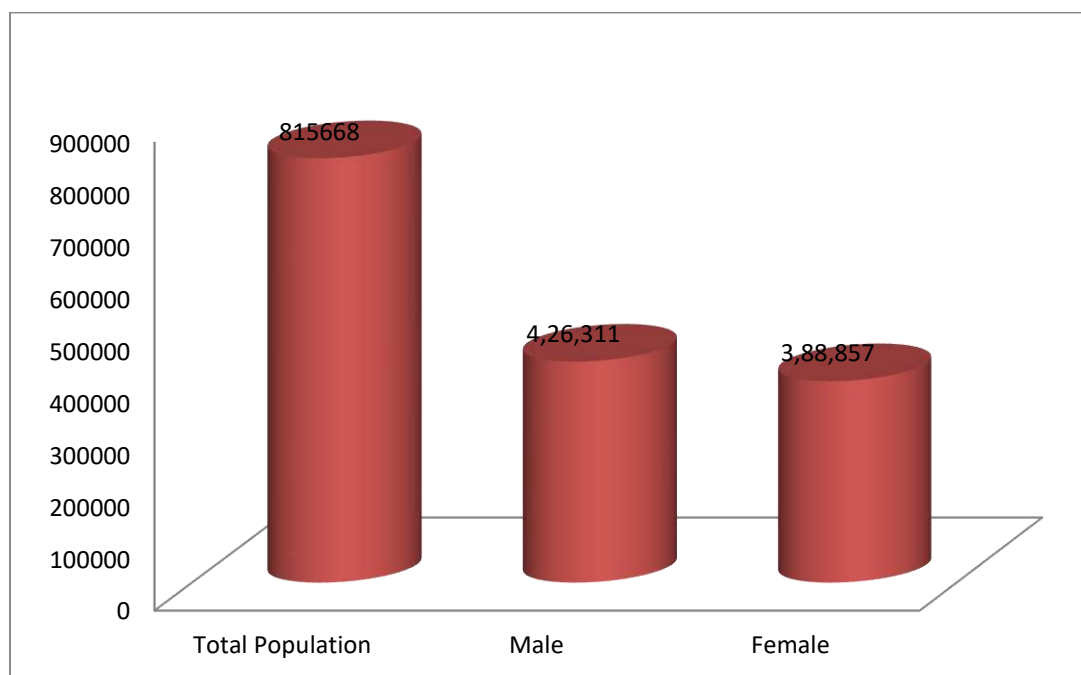


Figure 4.4: Graphical distribution of population distribution of Kapurthala District

4.6 Cropping pattern

Punjab is a fertile land of five rivers which are Sutlej, Beas, Ravi, Jhelum and Chenab (all 5 being tributaries of the Indus River). This makes the agriculture of Punjab rich and diverse. Wheat, paddy, and maize are the major cereal crops.

The total cropped area of the district during the year 2009-10 works out to 219000 hectares. Agriculture is the main occupation of the people in the District, having different types of soil and agro-climate conditions which are quite suitable for

the growing of various types of cereals, vegetables, fruits and other crops. The major crops grown in the district are Wheat, Paddy, Maize, Barley, and Millet. Besides these, Potato and a variety of vegetable like green-peas, cauliflower, cabbage, spinach tomatoes, etc. are also grown in the district. The Kapurthala is also quite suitable for various fruits such as Kinnow, Sweet Orange, Lemon, Mango, Litchi, Guava, Ber etc. The economy is mostly agrarian and majority of population is depending on agriculture and activities allied to it for earning their lively hood. The un-irrigated land depends upon the rainy season for irrigation. Soil in the district varies from sandy loam to clay. The Major part of the lands are irrigated and the irrigation facilities are provided by lifting water from streams, shallow, dug wells and medium to deep tube wells in the area.

4.7 Land Form and Seismicity

As per the Earthquake Zonation map, Punjab lies in a downwarp of the Himalayan foreland, of variable depth, converted into flat plains by long-vigorous sedimentation. This is known as a geosyncline. This has shown considerable amounts of flexure and dislocation at the northern end and is bounded on the north by the Himalayan Frontal Thrust. The floor of the trough (if seen without all the sediments) is not plain and shows corrugated inequalities and buried ridges (shelf faults). Much of Punjab lies in the Punjab Shelf, bounded on the east by the Delhi-Haridwar Ridge and on the south by the Delhi-Lahore Ridge. Most earthquakes in this region are shallow though a few earthquakes of intermediate-depth have been recorded in Punjab. However, it must be stated that proximity to faults does not necessarily translate into a higher hazard as compared to areas located further away since the damage from earthquakes depends on numerous factors such as subsurface geology as well as adherence to the building codes.

The districts of Ferozpur, Faridkot, Patiala, Mansa, Sangrur, and Bhatinda are in Earthquake Zone III. The districts of Amritsar, Gurdaspur, Kapurthala, Jalandhar, Kapurthala, Ludhiana, and Rupnagar are in Earthquake Zone IV. Kapurthala district comes under India's seismic zone-IV (Figure 4.5).



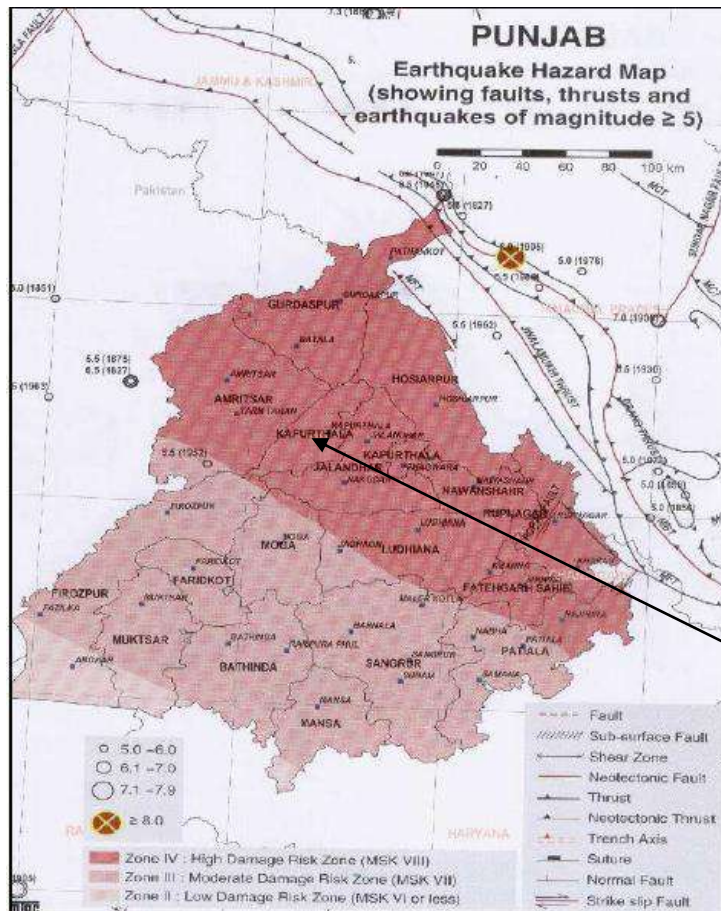


Figure 4.5: Earthquake zonation map of Punjab highlighting the Kapurthala district

Source: Earthquake Hazard Map of Punjab (<http://punenvis.nic.in>)

4.8 Flora and Fauna

The plains in the state of Punjab have very few block forests, with most of the tree cover being in the form of “strip forests” alongside the vast network of roads, rails, canals, drains, bunds etc. The “Block” forest cover in Punjab is mainly located in the sub-mountainous “Kandi” tract along the Northern boundary of the state adjoining Himachal Pradesh. Though this sub-mountainous Kandi tract is only 2 % of the geographical area of Punjab, it has a significant role to play in regulating the hydrology of the state.

4.8.1 Major Flora of district Kapurthala

The common trees found in the area are Kikar, Shisham, Poplar and Eucalyptus. Sultanpur Lodhi Tehsil is known for its palm trees. Mango trees are found in abundance in the area bordering Hoshiarpur District.

Among the common shrubs found in the ‘Bet’ area is Leh, Jhau, Plich, and Blaatc. Among the aquatic plants, the more important are Ajal, Karali and Bhalu. Sarkanda and Kahi are useful reeds found in the riverain tract. Kans is found in sandy soil.



4.8.2 Fauna

Harike Wildlife Sanctuary also locally known as "Hari-ke-Pattan" is one of the largest wetlands in northern India situated at the confluence of two major rivers of Punjab i.e., Sutlej and Beas. Harike wetland came into existence in 1953 due to the construction of a barrage on River Sutlej. The Beas and Sutlej rivers together bring in about 25 million-acre feet of water per annum to the Harike Wildlife Sanctuary. This man-made, riverine wetland spreads across three districts of Punjab i.e., Tarn Taran, Ferozepur and Kapurthala (https://wildlife.punjab.gov.in/tourism_page/1).

The sanctuary is a bird watcher's paradise and attracts thousands of migratory birds during winter, some from as far off as Siberia and the Arctic. It is a refuge for a large number of resident and migratory birds. Some 45,000 ducks have been recorded here during the peak migratory season. The wigeon, common teal, pintail, shoveller and brahminy ducks are commonly seen during the winter. The lake is particularly famous for diving ducks, such as the crested pochard, common pochard and tufted ducks which occur in very large numbers. Around 375 bird species have been recorded; 40 species were long distance migrants which pass through or winter at Harike lake. Apart from avifauna, some 7 species of turtle and 26 species of fish have been recorded. The mammals found at Harike include the smooth Indian otter, the jungle cat, jackal, Indian wild boar and the common mongoose (<https://ferozepur.nic.in/tourist-place/harike-wild-life-sanctuary-harike/>).

Department of Forests and Wildlife Preservation (Forest Branch), Government of Punjab, via notification no. 34/13/2017-Ft-5/1052756/1 Chandigarh, date 29.08.2017, declared area of River Beas as "Conservation Reserve" from date of notification. Details of area as under:

"River Beas with all water channels from 52 Head Talwara to Harike Barrage including all Government area in River Beas."

All the potential sandbars lie within Beas river conservation reserve. As per Wildlife/DFO, Mining is prohibited in Beas river conservation reserve under Wildlife(Protection) Act, 1972. Wildlife/DFO letter is attached as Annexure I.

A map showing Wildlife Protect areas in Kapurthala District are furnished in Figure 4.6.



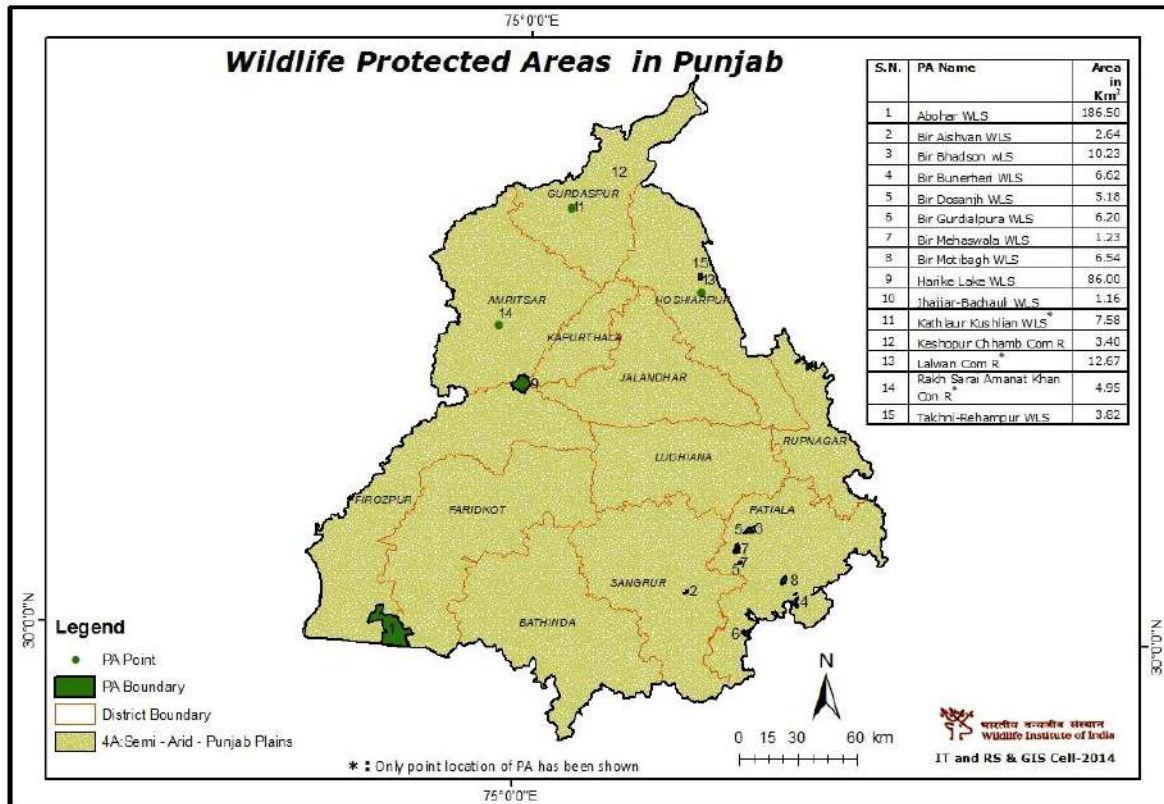


Figure 4.6: Wildlife Protected areas in Punjab State

(Source: [Wildlife institute of India](#))



5 Physiography of the District

5.1 Introduction

The Kapurthala district is the northernmost district of Punjab state. It falls in the Jalandhar division and River Beas touches it in Western side. The district lies between north-latitude 31°-36' and 32°-34' and east longitude 74°-56' and 75°-24' and shares common boundaries with district in the north, Beas River in the north-east, Hoshiarpur district in the south-east, Moga and Ferozpur district in the south, Amritsar, Tarn taran district in the North-west and Pakistan in the north-west.

All the Tehsils of the district namely Kapurthala, Phagwara, Sultanpur Lodhi and Bholath are plain and similar to the rest of the Punjab plains in structure. The landscape of the district has varied topography comprising undulating plain, the flood plains of the Beas and the upland plain.

The flood plains of the Beas are separated from the upland plain by sharp river-cut bluffs. They are low lying, with slightly uneven topography. Sand dominates in the soil structure of the flood plains, but it diminishes in both quantity and coarseness in the upland plain. The upland plain covers a large part of the district particularly. Its elevation ranges from about 305 metres above sea level in the north-east to about 213 metres above sea level in the south-west, with a gentle gradient of about 1 metre in 1.6 km. This is the most important physiographic unit in the district.

5.2 Climate Condition

The climate of the district is classified as tropical steppe and hot which is mainly dry except in rainy months and characterized by intensely hot summer and cold winter. There are four seasons in a year namely the cold season from November to March, hot season from April to June, monsoon season from last week of June to the middle of September followed by post monsoon season till the beginning of November. During cold season, a series of western disturbances affect the climate of the city during the summer months i.e. from April to June, weather is very hot, dry and uncomfortable. The weather becomes humid and cloudy during July to September due to penetration of moist air of oceanic origin into the atmosphere. In summer, maximum and minimum temperatures are about 41 ° C to 27°C and the maximum temperature may occasionally reach up to 45° C (in May/June) and In cold winter, maximum and minimum temperatures are about 19° C and 6°C in December/January.

The normal annual rainfall is 779 mm in 33 days which is unevenly distributed over the district and normal monsoonal rainfall is 584 mm. The average annual rainfall in the district is 640.37 mm. The south west monsoon which contributes 75% sets in last week of June and withdrawn in middle of September, July and August receive maximum rainfall. Rest 25% of annual rainfall occurs in the non-monsoon



months in the wake of western disturbances and thunder storms. Details of rainfall data of last ten years (from 2010 to 2021) is furnished in Table 5.1.



Table 5.1: Details of rainfall data of five years (from 2017 to 2021)

mm

Year	District	January	Feb	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.	Total
2017	Kapurthala	38.5	2.5	31.0	13.0	55.0	167.0	218.0	221.0	1.0	0.0	9.5	22.5	779.0
2018		20.0	0.0	13.3	28.5	7.0	133.7	165.5	99.6	435.5	2.5	0	0.0	905.6
2019		5.8	0.0	17.1	13.6	44.0	8.6	193.8	294.0	112.8	10.8	0.0	20.5	721.0
2020		54.8	12.2	58.5	10.2	75.0	6.6	117.0	55.7	0.0	0.0	15.0	0.0	405.0
2021		19.2	6.4	6.8	19.8	4.0	11.0	247.0	22.2	326.1	46.0	1.3	0.0	709.8

[\(Source: Executive Engineer cum District Mining Officer, Kapurthala\)](#)



5.3 Hydrogeology of Kapurthala

The district is occupied by Indo-Gangetic alluvial plain of Quaternary age. The Central Ground Water Board has drilled 12 Piezometers, in the district to delineate and determine potential aquifer zones, evaluation of aquifer characteristics etc. In alluvium thin granular zones exist down to the entire thickness, the top aquifer ranges from 20 to 45 m. The depth of the top aquifer in the North is up to 40 m., in the south it is upto 45m, in the Central it is 20 m. the top granular zone is interspersed by 2 to 3 thin clay lenses. A thick clay bed of thickness from 15 to 35 m. present beneath the Granular zone. Broadly it indicates 10 to 12 prominent granular horizons exist down to 350 m. and are separated by thick clay layers. The granular material is comprised of fine to coarse sand and at places mixed with gravel and pebble.

Water level behavior: During the pre-monsoon period depth to water in the district varies from 4.04 m bgl (western part) to 23.05m bgl (Eastern part). The depth to water level less than 10m in the Northern (Nadala and Dhilwan blocks) it ranges between 10 to 20 m in Southern parts of district (Sultanpur Lodhi and Kapurthala blocks), water levels still becomes deeper (>20m) in the western parts of the district falling in Kapurthala and Phagwara blocks.

During the pre-monsoon period depth to water in the district varies from 2.95 m bgl (western part) to 24.21m bgl (Eastern part). The depth to water level less than 10m in the Northern (Nadala and Dhilwan blocks) it ranges between 10 to 20 m in Southern parts of district (Sultanpur Lodhi and Kapurthala blocks), water levels still becomes deeper (>20m) falling in Phagwara block (CGWB, 2013).

The elevation of the water table in the district varies from 221.34 to 229.34 m above mean sea level. The water table elevation map shows the general slope of the water table towards South SE from North. The average gradient of the water table is of the order of 1.5 m/km.

Water Quality: Chemical quality data obtained from the analysis of ground water samples representing shallow aquifers reveals that ground water is Alkaline in nature and fresh to moderately saline. Concentrations of various chemical parameters, except nitrate at Kapurthala (105 mg/l), all ground waters are within permissible limits for safe drinking water (BIS, 1991, Rev.2007). Among anions, bicarbonate is the dominant anion and among cations, Ca and Mg are dominant. Arsenic is more than the permissible limit (0.01 mg/l) at Dhilwan (0.072 mg/l). By and large, Ground water is suitable for drinking purposes.

Hydrogeological map of the district is furnished as Figure 5.1.



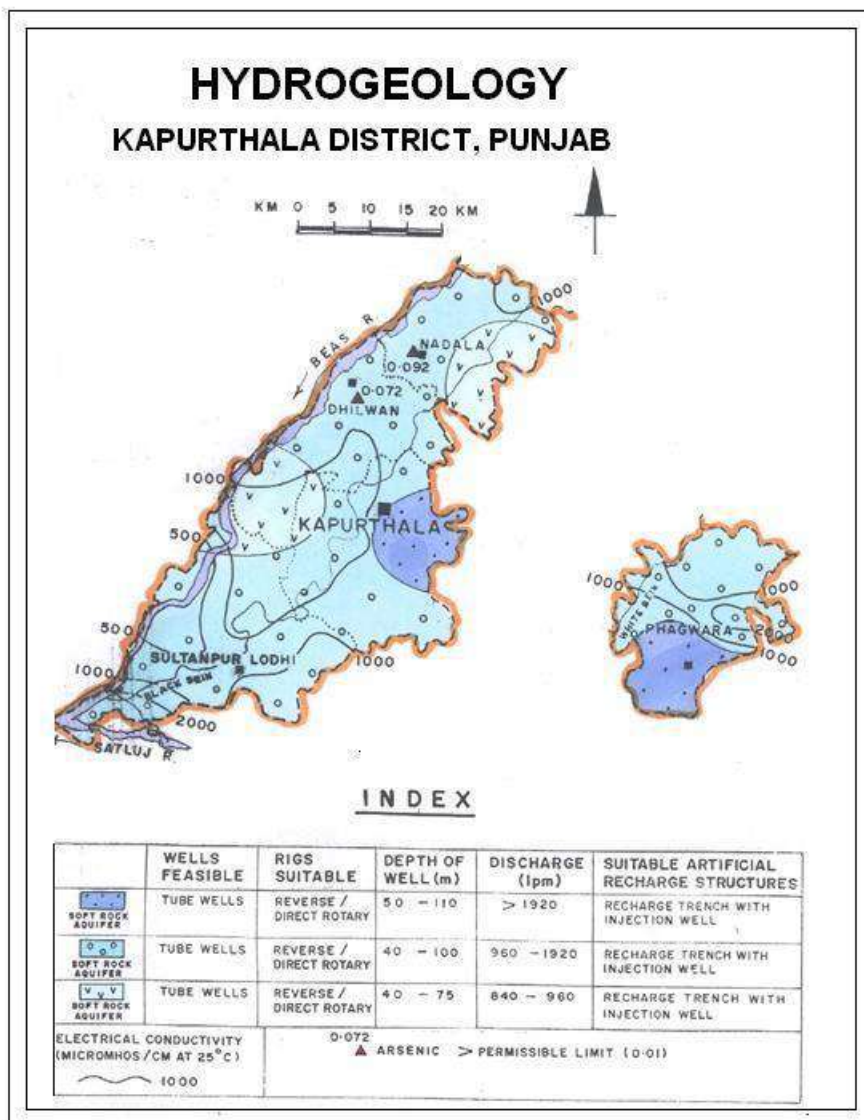


Figure 5.1: Hydrogeological map of Kapurthala District
 (Source: CGWB, 2013)

5.4 Ground Water Development

The block wise ground water resource potential in the district has been assessed as per GEC-97. The stage of ground water development ranges between 192% (block-Nadala) to 369% (block- Phagwara). The total replenishable ground water resource in the district is 653.76 mcm. The net ground water draft is 1539.55 mcm thus over exploiting 893.59mcm. The stage of ground water development in the district is 242.6%. The block wise ground water resource potentials in the district are given in Table 5.2.



Table 5.2: Ground water resources of Kapurthala district

Assessment Unit	Net Annual Ground Water Availability	Existing Gross Ground Water Draft for irrigation	Existing Gross Ground Water Draft for domestic and industrial water supply	Existing Gross Ground Water Draft for all uses	Provision for domestic, and industrial requirement supply to 2025 years	Net Ground Water Availability for future irrigation development	Stage of Ground Water Development	Category of assessment unit
NADALA	11538	21667	460	22127	568	-10697	192	Over-Exploited
DHILWAN	13684	28082	425	28507	519	-14917	208	Over-Exploited
KAPURTHALA	14205	26588	1327	27916	1532	-13915	197	Over-Exploited
PHAGWARA	9258	32937	1216	34154	1453	-25133	369	Over-Exploited
SULTANPUR LODHI	16691	40808	443	41251	580	-24697	247	Over-Exploited
DISTRICT TOTAL	65376	150082	3871	153955	4652	-89359	242.6	Over-Exploited

(Source: Ground Water Information Booklet, District Kapurthala Punjab)

5.5 Drainage System

The main drainage system of the district forms a part of Beas River system. The flow direction is towards Southwest. West or Black Bein drains the central part and flows NE to SW. In Phagwara tehsil East or White Bein Flows West wards and then takes SW turn near western border of the tehsil. It is main drainage system in the tehsil and joins the Sutlej River. The Beas River has tendency to shift westward, there are many small tributaries of Beas Sutlej rivers like Kalnabein, Rau Nala and Kail nala.

River details are given in Table 5.3, 5.4 and 5.5. A drainage map is furnished in Figure 5.2.

Table 5.3: Details of major rivers of Kapurthala District

Name of the River	Length with in district (km)	Width (Km)	Colour of Sand	Type
Beas River	70.42	1.2	White	Perennial



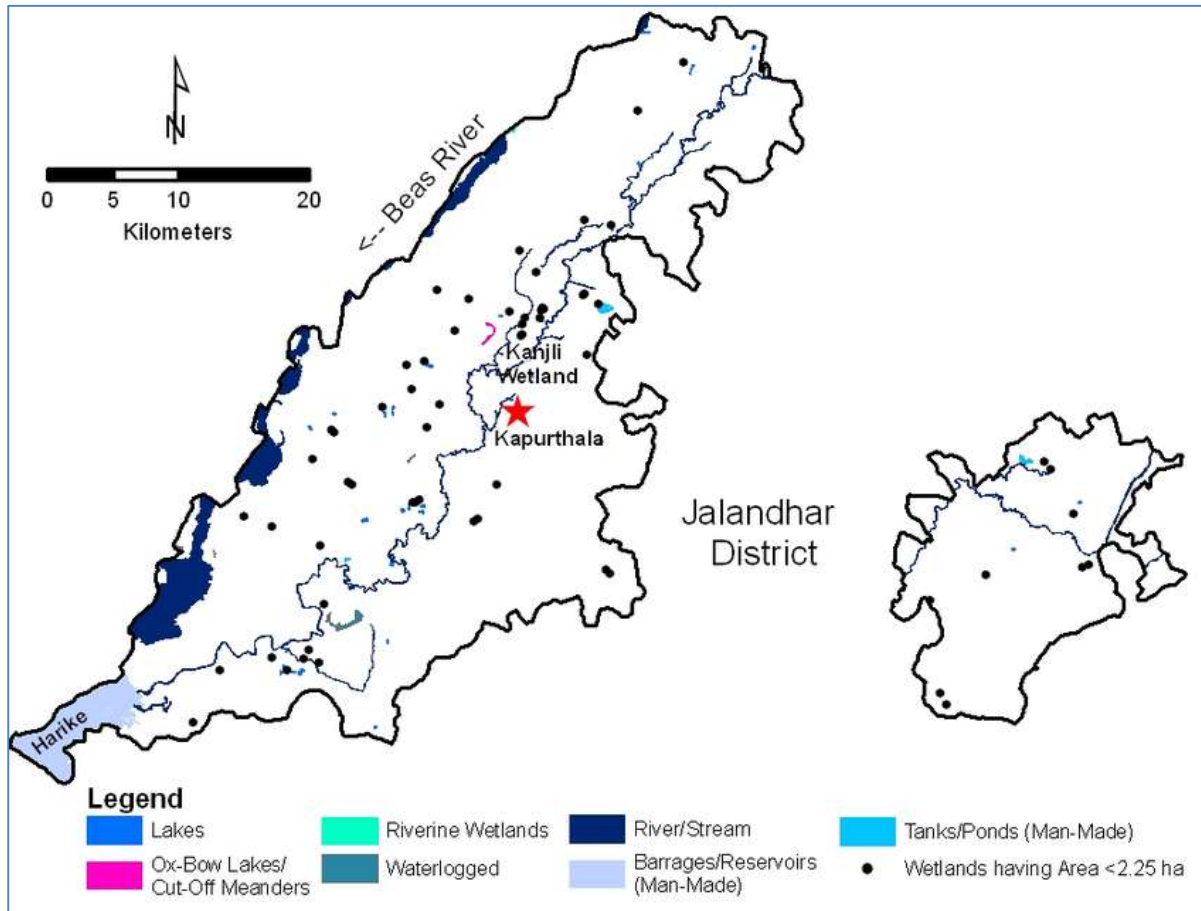


Figure 5.2: Drainage map of Kapurthala district
(Source: Ground Water Information Booklet, District Kapurthala Punjab)

Table 5.4: Drainage system with Description River

S.No.	Name of the River	Area drained (Sq.km)	% Area drained in the district
1	Beas River	37.22	2

Table 5.5: Salient Features of important rivers and streams

S.No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin (m)
1	Beas River	70.42	Rohtang Pass	4361



6 Geology and Mineral Wealth

6.1 Geology

Geologically, the district forms part of the Punjab basin of the Indus super-basin of the vast Indo-Gangetic Plain and is occupied by Quaternary to present day sediments of fluvial as well as Aeolian origin. These Quaternary sediments uncomfortably overlie the Siwalik Group of rocks, which in turn overlie the crystalline basement. The Quaternary deposit can be broadly classified under two distinct categories viz., Fluvial deposits and Aeolian deposits. The former can be further classified into (i) Older Alluvium and (ii) Younger Alluvium. The Aeolian deposits occur as sand dunes and sheets. The generalized stratigraphic sequence of the area is given in Table 6.1.

Table 6.1: Geological Unit of Kapurthala District

Lithological Unit	Lithological Characteristics	Age
Aeolian Sediments	Brownish yellow, micaceous sand with silt, clay and calc. Siliceous concretions Kankar	Present to Recent
Newer Alluvium	Pebbly, fine to coarse, grey, micaceous sand, silt with subordinate amounts of clay & kankar	Present to Recent
Newer Alluvium	Reddish brown silty sand bed with occasional pebbles	Recent to Sub-Recent
Older Alluvium Aeolian	Pebbly, fine to coarse, grey, micaceous sand, Alternating bands of golden brown, silty clay, sand and silt with Kankar upper horizon is rusty red due to oxidation	Sub-Recent to Pleistocene

[\(Source: Central Ground Water Board, North Western Region, Chandigarh Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India 2018\)](#)

6.2 Mineral wealth

The Kapurthala district has no major mineral deposits. The minor mineral of the district includes silty clay and masonry sand.

The area around Kapurthala is underlain by the Indo-Gangetic alluvium which consists of silt, clay, kanker, sand, gravel and pebbles. The subsurface geology of the area as revealed by water-well borings indicates that fine to coarse grained sand predominates down to a depth of about 92 m. A persistent clay bed is met with between the depth range of 160 m and 175 m.



As regards mineral wealth, certain minor minerals are found in the district in the western and south-western parts. Building materials such as boulders, pebbles, shingles and sands are found west of Sultanpur Lodhi around the confluence of Satluj with Beas. Brick clays used for making hard burn brick are found at many localities, especially around shallow water depressions.

[\(Source: Brief Industrial Profile of District Kapurthala\)](#)



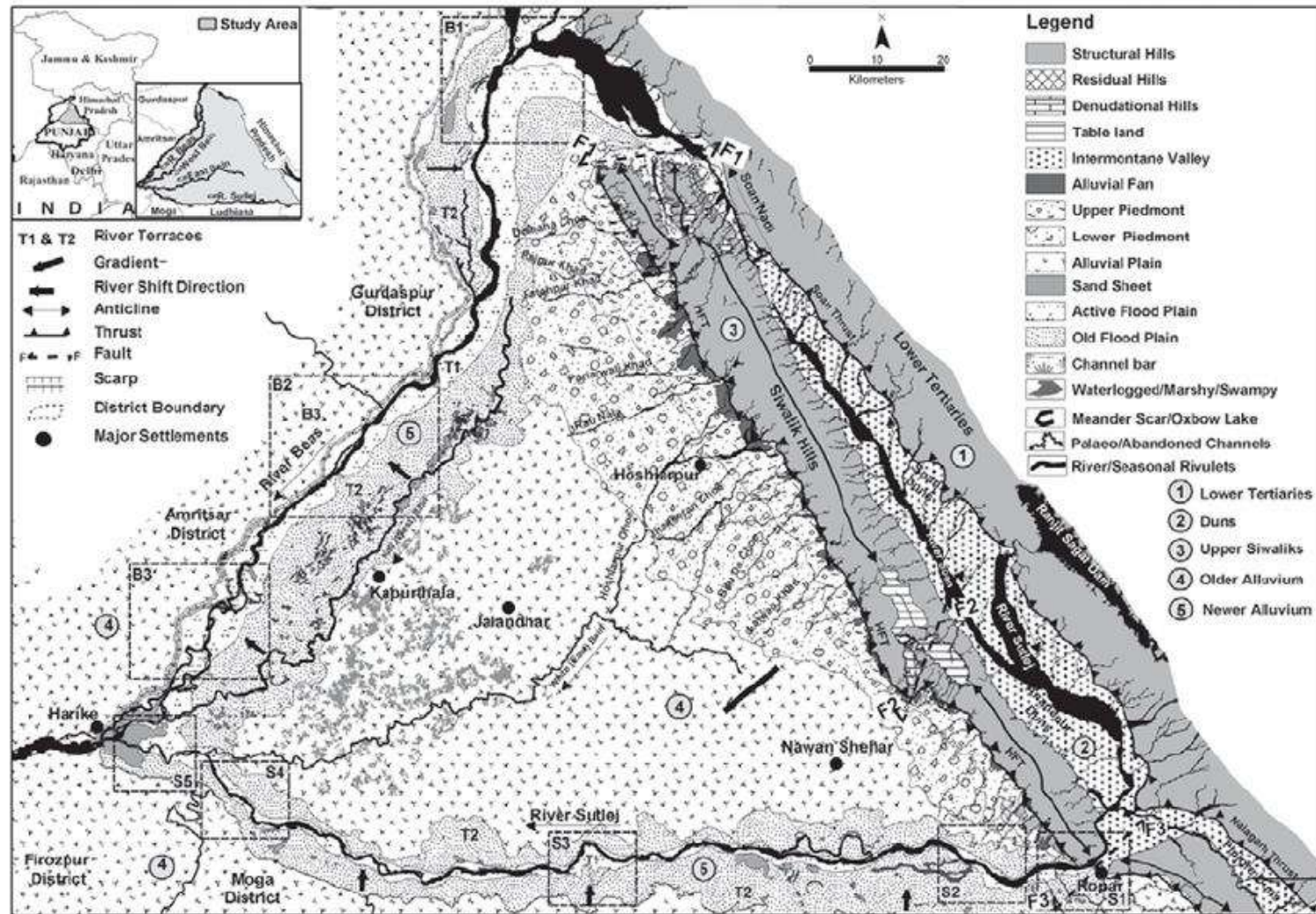


Figure No. 6.1: Geological Map of Kapurthala and its surrounding district of Punjab (Source: Bhatt et.al.2008)

7 Estimation of deposits and Replenishment Studies

7.0. General:

Replenishment study for a river solely depends on estimation of sediment load for any river system and the estimation is a time consuming and should be done over a period. The process in general is very slow and hardly measurable on season-to-season basis except otherwise the effect of flood is induced which is again a cyclic phenomenon.

Usually, replenishment or sediment deposition quantities can be estimated in the following ways as given below:

- A. The replenishment estimation based on a theoretical empirical formula with the estimation of bed-load transport comprising of analytical models to calculate the replenishment estimation.
- B. Replenishment study based on satellite imagery involves demarcation of sand bars potential for riverbed mining. Both pre and post monsoon images need to be analysed to established potential sand bars.

In this report, for volume estimation of sand, "Depth x Area" has been followed. The sand bars are interpreted with the help of satellite imageries. Ground truthing has been done for 100% of the total identified sand bars. During ground truthing, width and length of each segment were physically measured. It has also been observed that in few cases, sand bars have attained more than 3-meters height from the average top level of the river beds. Considerations of sand resources have been restricted within 3 meters from the average top surface of the river bed.

- C. Direct field measurement of the existing leases involving estimation of the volume difference of sand during pre and post-monsoon period. With systematic data acquisition, a model has developed for calculation of sediment yield and annual replenishment with variable components.



7.1. Common empirical formulae used for estimating runoffs and sediment yields

The river reaches with sand provide the resource and thus it is necessary to ascertain the rate of replenishment of the mineral. Regular replenishment study needs to be carried out to keep a balance between deposition and extraction. The replenishment estimation based on a theoretical empirical formula comprising of analytical models to calculate.

Sediment load deposition in a river is depend on catchment area, weathering index of the various rock types of the catchment area, land-use pattern of the area, rainfall data and grain size distribution of the sediments. Again, the sediment load estimation is not a dependent variable of the imaginary district boundary, but it largely depends upon the aerial extents of the catchment areas, which crossed the district and state boundaries.

Methodology of the study:

The replenishment estimation is based on a theoretical empirical formula with the estimation of bedload transport comprising of analytical models to calculate the replenishment estimation. Sedimentation in riverbed depends on catchment yield, peak flood discharge due to rainfall, bed load transport rates and sediment yield characteristic of the river. Some of the common methods used for Replenishment study are explained below.

7.1.1 Catchment yield calculation:

The total quantity of surface water that can be expected in a given period from a stream at the outlet of its catchment is known as yield of the catchment in that period. The annual yield from a catchment is the end product of various processes such as precipitation, infiltration and evapo-transpiration operating on the catchment.

Catchment yield can be estimated using following formula:

$$\text{Catchment yield (m}^3\text{)} = \text{Catchment area (m}^2\text{)} * \text{Runoff coefficient (\%)} * \text{Rainfall (m)}$$

The runoff generated from the watershed is analyzed using Strange's Tables Method to get the reliable yield results. Runoff from a catchment is dependent upon annual rainfall as well as catchment characteristics such as soil types and the type of groundcover / land usage. Remote sensing was used for demarcation of catchment area relevant to the drainage system. Runoff coefficient of the catchment has been established based on Strange's table.



Strange in 1892, studied the available rainfall and runoff and obtained yield ratios as functions of indicators representing catchment characteristics (Subramanya, 2008). Catchments are classified as good, average and bad according to the relative magnitudes of yield they give. For example, catchment with good forest cover and having soils of high permeability would be classified as bad, while catchment having soils of low permeability and having little or no vegetal cover is termed good. Based on the study Strange established runoff coefficient table as given in Table 7.1:

Table 7.1: Runoff coefficient of the catchment based on Strange's table

Total monsoon rainfall (mm)	Runoff coefficient (%)			Total monsoon rainfall (mm)	Runoff coefficient (%)		
	Good catchment	Average catchment	Bad catchment		Good catchment	Average catchment	Bad catchment
25.4	0.1	0.1	0.1	787.4	27.4	20.5	13.7
50.8	0.2	0.2	0.1	812.8	28.5	21.3	14.2
76.2	0.4	0.3	0.2	838.2	29.6	22.2	14.8
101.6	0.7	0.5	0.3	863.6	30.8	23.1	15.4
127	1	0.7	0.5	889	31.9	23.9	15.9
152.4	1.5	1.1	0.7	914.4	33	24.7	16.5
177.8	2.1	1.5	1	939.8	34.1	25.5	17
203.2	2.8	2.1	1.4	965.2	35.3	26.4	17.6
228.6	3.5	2.6	1.7	990.6	36.4	27.3	18.2
254	4.3	3.2	2.1	1016	37.5	28.1	18.7
279.4	5.2	3.9	2.6	1041.4	38.6	28.9	19.3
304.8	6.2	4.6	3.1	1066.8	39.8	29.8	19.9
330.2	7.2	5.4	3.6	1092.2	40.9	30.6	20.4
355.6	8.3	6.2	4.1	1117.6	42	31.5	21
381	9.4	7	4.7	1143	43.1	32.3	21.5
406.4	10.5	7.8	5.2	1168.4	44.3	33.2	22.1
431.8	11.6	8.7	5.8	1193.8	45.4	34	22.7
457.2	12.8	9.6	6.4	1219.2	46.5	34.8	23.2
482.6	13.9	10.4	6.9	1244.6	47.6	35.7	23.8
508	15	11.3	7.5	1270	48.8	36.6	24.4
533.4	16.1	12	8	1295.4	49.9	37.4	24.9
558.8	17.3	12.9	8.6	1320.8	51	38.2	25.5
584.2	18.4	13.8	9.2	1346.2	52.1	39	26
609.6	19.5	14.6	9.7	1371.6	53.3	39.9	26.6
635	20.6	15.4	10.3	1397	54.4	40.8	27.2
660.4	21.8	16.3	10.9	1422.4	55.5	41.6	27.7
685.8	22.9	17.1	11.4	1447.8	56.6	42.4	28.3
711.2	24	18	12	1473.2	57.8	43.3	28.9
736.6	25.1	18.8	12.5	1498.6	58.9	44.4	29.4
762	26.3	19.7	13.1	1524	60	45	30

(Source: Subramanya, 2008)



Rainfall returns period for 25, 50 and 100 years calculated as below:

As per Weibull's Formula (Subramanya, 2008),

Return period/Recurrence interval = $(n+1)/m$

Where: n number of years on record;

m is the rank of observed occurrences when arranged in descending order.

7.1.2 Peak Flood Discharge Calculation:

The term "peak discharge" stands for the highest concentration of runoff from the basin area. The accurate estimation of flood discharge remains one of the major challenges as it depends upon physical characteristic of the catchment area and the flood intensity, duration and distribution pattern. There have been many different approaches for determining the peak runoff from an area. As a result, many different models (equations) for peak discharge estimation have been developed. Formulas used for Peak Discharge calculation areas below:

As per Dicken's formula (Subramanya, 2008),

$$Q = CA^{3/4}$$

Where: Q is Maximum flood discharge (m^3/sec) in a river

A is Area of catchment in Sq. Km

C is Constant whose value varies widely between 2.8 to 5.6 for catchments in plains and 14 to 28 for catchments in hills

As per Jarvis formula (Subramanya, 2008),

$$Q = CA^{1/2}$$

Where: Q is Maximum flood discharge (m^3/sec) in a river

A is Area of catchment in Sq. Km

C is Constant whose value varies between 1.77 as minimum and 177 as maximum. Limiting or 100 percent chance floods are given by the value of C of 177

As per Rational formula (Subramanya, 2008),

$$Q = CIA$$

Where: Q is Maximum flood discharge (m^3/sec) in a river

A is Area of catchment in Sq. Km



C is Runoff coefficient which depends on the characteristics of the catchment area. It is a ratio of runoff: rainfall

I is Intensity of rainfall (in m/sec)

7.1.3 Bed Load Transport Calculation:

The most important problems in river engineering are to predict bed load transport rates in torrential floods flowing from mountainous streams. Three modes of transport namely; rolling, sliding and saltation may occur simultaneously in bed load transport. The different modes of transportation are closely related and it is difficult, if not impossible, to separate them completely. There are number of equations to compute the total sediment load. Most of these equations have some theoretical and empirical bases.

Ackers and White Equation:

Ackers and White (1973) used dimensional analysis based on flow power concept and their proposed formula is as follows.

$$C_t = C_s G_s (d_{50}/h) (v/u_*)^{n'} [(F_{gr}/A_1) - 1] m$$

The dimensionless particle d_{gr} is calculated by:

$$d_{gr} = d_{50} (g(G_s - 1)/v^2)^{1/3}$$

The particle mobility factor F_{gr} is calculated by:

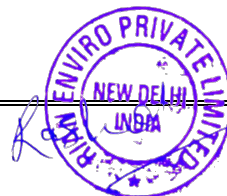
$$F_{gr} = (U_*^{n'} / (G_s - 1)g d_{50})^{1/2} * (V / (5.66 \log(10h/d_{50}))^{1-n'}$$

Where,

- A_1 = Critical particle mobility factor
- C_s = Concentration coefficient in the sediment transport function
- C_t = Total sediment concentration
- d_{50} = Median grainsize
- d_{gr} = Dimensionless particle diameter
- F_{gr} = Particle mobility parameter
- g = Acceleration of gravity
- D_s, S_g = Specific gravity
- h = Water depth
- m = Exponent in the sediment transport function
- n' = Manning roughness coefficient
- U_* = Shear velocity
- V = Mean flow velocity
- v = Kinematic viscosity

Meyer – Peter's equation:

Meyer-Peter's equation (Ponce, 1989) is based on experimental work carried out at Federal Institute of Technology, Zurich. Mayer-Peter gave a dimensionless equation based, for the first time, on rational laws. Mayer- Peter equations giving an empirical correlation of bed load transport rates in flumes and natural rivers. The simplified Meyer-Peter's equation is given below:



$$g_b = 0.417[\tau_0 (\eta' / \eta)^{1.5} - \tau_c]^{1.5}$$

Where,
 g_b = Rate of bed load transport (by weight) in N per m width of channel per second.

η' = Manning's coefficient pertaining to grain size on an unrippled bed and Strickler formula i.e. $\eta' = (1/24) \times d^{1/6}$ where d is the median size (d_{50}) of the bed sediment in m.

η = The actual observed value of the rugosity coefficient on rippled channels. Its value is generally taken as 0.020 for discharges of more than 11cumecs, and 0.0225 for lower discharges.

τ_c = Critical shear stress required to move the grain in N/m² and given by equation $\tau_c = 0.687da$, where da is mean or average size of the sediment in mm. This arithmetic average size is usually found to vary between d_{50} and d_{60} .

τ_0 = Unit tractive force produced by flowing water i.e. $\gamma_w RS$. Truly speaking, its value should be taken as the unit tractive force produced by the flowing water on bed = $0.97\gamma_w RS$. R is the hydraulic mean depth of the channel (depth of flow for wider channel) and S is the bed slope.

7.1.4 Sediment Yield Estimation:

Sedimentation occurred as the velocity decreases along with its ability to carry sediment. Coarse sediments deposit first, then interferes with the channel conveyance, and may cause additional river meanders and distributaries. The area of the flowing water expands, the depth decreases, the velocity is reduced, and eventually even fine sediments begin to deposit. As a result, deltas may be formed in the upper portion of reservoirs. The deposited material may later be moved to deeper portions of the reservoir by hydraulic processes within the water body.

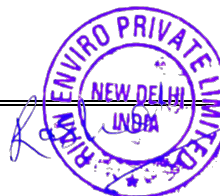
There are many sediment transport equations which are suitable for use in the prediction of the rate of replenishment of river. Some of the famous sediment equations are:

1. Dendy – Bolton Equation
2. Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977)

Dendy–Bolton Equation:

Dendy–Bolton formula (Dendy and Bolton 1976) is often used to calculate the sedimentation yield because: -

- The formula uses catchment area and mean annual runoff as key determinants.
- It does not differentiate in basin wide smaller streams and their characteristics.



- Dendy and Bolton equation calculates all types of sediment yield i.e. Sheet and rill Erosion gully Erosion, Channel Bed and bank erosion and mass movement etc.

Dendy-Bolton determined the combined influence of runoff and drainage area on sediment yield to compute the sediment yield. They developed two equations i.e. for run off less than 2 inch and for run off more than 2 inch, which are given below:

For run off less than 2 inch:

$$(Q < 2 \text{ in}) S = 1289 * (Q)^{0.46} * [1.43 - 0.26 \text{ Log } (A)]$$

For run off more than 2 inches:

$$(Q > 2 \text{ in}): S = 1958 * (e^{-0.055 * Q}) * [1.43 - 0.26 \text{ Log } (A)]$$

Where: S = Sediment yield (tons/sq miles/yr)

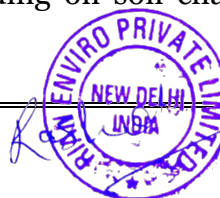
Q = Mean Annual runoff (inch)

A = Net drainage area in sq. mile

Dendy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation's development. However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values. The equations express the general relationships between sediment yield, runoff, and drainage area. Many variables influence sediment yield from a drainage basin. They include climate, drainage area, soils, geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decreases as drainage area increases. As drainage area increases, average land slopes usually decrease; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tend to decrease sediment yield per unit area.

Modified Universal Soil Loss Equation (MUSLE):

Modified universal soil loss equation (MUSLE) for estimation of sediment yield is also used widely (Wischmeier and Smith, 1978). MUSLE is a modification of the Universal Soil Loss Equation (USLE). USLE is an estimate of sheet and rill soil movement down a uniform slope using rain-fall energy as the erosive force acting on the soil (Wischmeier and Smith 1978). Depending on soil characteristics (texture,



structure, organic matter, and permeability), some soils erode easily while others are inherently more resistant to the erosive action of rain- fall.

MUSLE is similar to USLE except for the energy component. USLE depends strictly upon rainfall as the source of erosive energy. MUSLE uses storm-based runoff volumes and runoff peak flows to simulate erosion and sediment yield (Williams 1995). The use of runoff variables rather than rainfall erosivity as the driving force enables MUSLE to estimate sediment yields for individual storm events. The generalized formula of MUSLE is as below:

$$Y=11.8 X(Q X qP).56 X K X Ls X C X P$$

Where,

Y = sediment yield of stream (t/yr/km²),

Q = average annual runoff (m³),

K = soil erodibility factor,

qP = Highest discharge recorded (m³/s),

Ls = gradient/slope length,

C = cover management factor,

P = erosion control practice

7.1.5 Sediment Yield Calculation:

For Sediment yield calculation, following assumption/calculation taken in to consideration:

Catchment area (Watershed area) against Beas River has been calculated based on remote sensing data and the watershed map is furnished below:



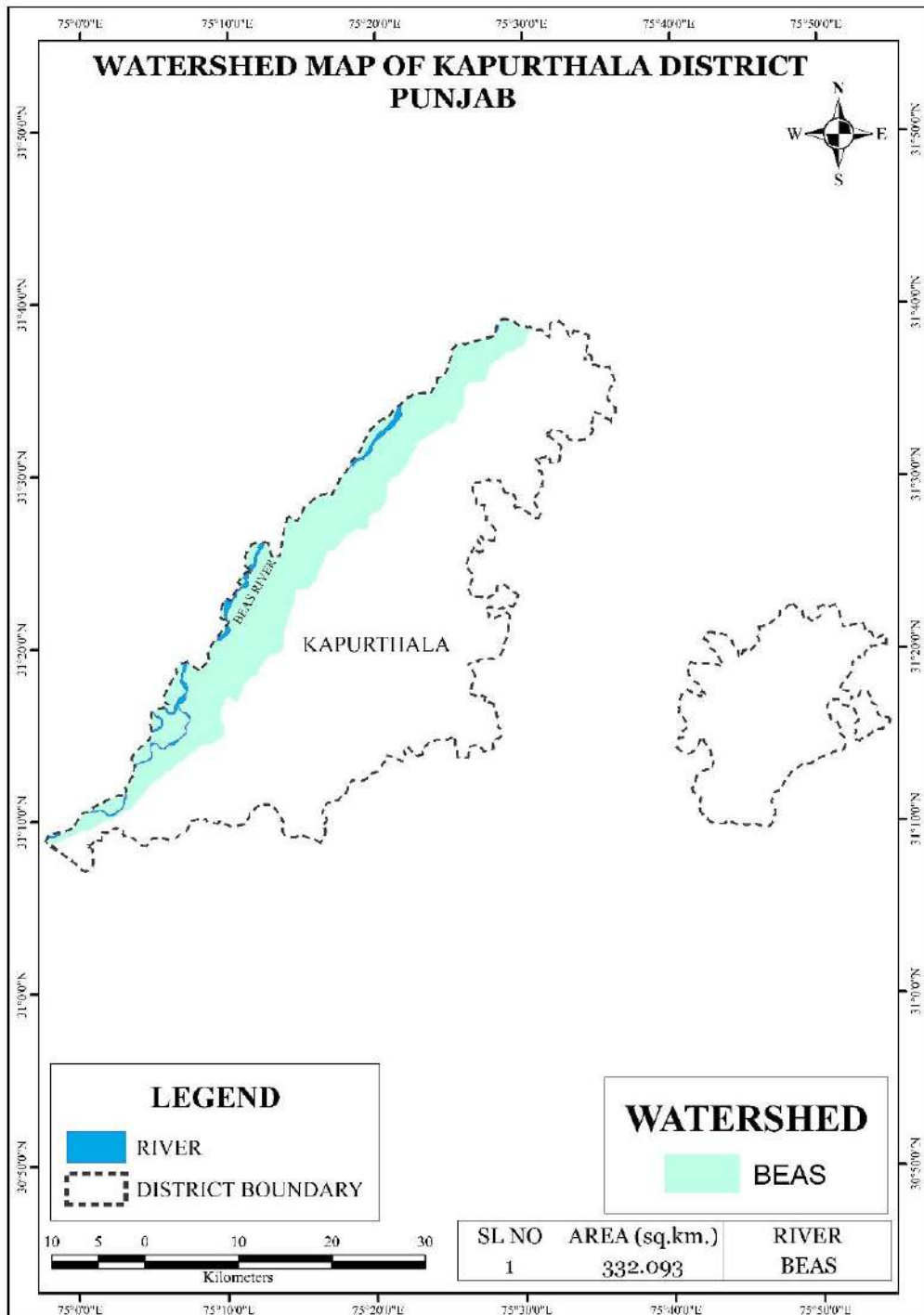


Figure 7.1: Watershed Map of Kapurthala

- Rainfall runoff coefficient as per Strange’s table for the catchment area is consider 18%, as the average rainfall (2017-2021) in the district is 704mm and the characteristic of the catchment of the district is average in nature.
- Sedimentation yield calculated as per Dendy Bolton formula as the equations express the general relationships between sediment yield, runoff, and drainage area.



The data estimated for Beas River in the district are tabulated below.

Estimation parameter	Beas
Catchment Area (m ²)	332100000
Annual Rainfall (m)	0.704
Strange Runoff coefficient (%)	18%
Annual Run-off (m)	0.15488
Catchment Yield (m ³)	42083712
Sediment Yield (Tons/year)	43912.57

7.2. Replenishment study based on satellite imagery:

To delineate replenishment percentage in the river bed of the district, below mentioned steps have been followed.

1. Satellite imagery studies

Satellite imagery study involves demarcation of sand bars on riverbed of the district. Both pre and post monsoon images need to be analysed to established potential sand bars.

2. Field data collation

Field data collation was carried out during May- June for all the river ghats on continuous basis for pre monsoon period and October- November for all the river ghats on continuous basis for post monsoon period. In both the cases, relative elevation levels were captured through GPS/DGPS/ Electronic Total Station. Thickness of the sand bars was measured through sectional profiles.



Figure 7.2: Site view of Beas River



3. Selection of study profiles:

Study profiles are selected based on the occurrence of the sand bars in the channel profiles. Aerial extents of each of the profiles are mapped from satellite imageries. Frequency distribution did while selection of the ground truthing of the blocks.

4. Data compilation:

Following data were compiled for generation of this annual replenishment report:

- Elevation levels of the different sand Ghats and Sand Bar's as measured at site.
- Extents of the sand bars are measured from the pre monsoon satellite imageries.
- Sand production data of the district.

All these data were compiled while estimation of the replenished sand in the district.

5. Assessment of sediment load in the river:

Assessment of sediment load in a river is subjective to study of the whole catchment area, weathering index of the various rock types which acts as a source of sediments in the specific river bed, rainfall data over a period not less than 20 years, and finally the detail monitoring of the river bed upliftment with time axis. Again, the sediment load estimation is not a dependent variable of the imaginary district boundary, but it largely depends upon the aerial extents of the catchment areas, which crossed the district and state boundaries.

The major sand producing river of the district is Beas. Planning has been done for systematic sand mining in the rivers.

From the ground survey and satellite imageries study in the pre monsoon period, altogether 22 sand bars are identified in the district on Beas River and during post-monsoon period 41 sand bars identified.

For calculating the area of sand bars, following categorization of land within the channel area have been adopted:

- a. The untapped sand bars.
- b. The sand bars worked in the pre-monsoon period.
- c. Main channel course within the channel.



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Details of each sand bars along with their sand resources in pre monsoon and post monsoon period are provided in Table 7.2.

Table 7.2: Estimation of Sand Resources during Pre and Post Monsoon period of Kapurthala District

Pre monsoon						Post monsoon					
S L No	Sand Bar_Code	RL (m)	Area in sq.m.	Sand Thickn ess in m.	Sand Volum e in M. Cum	S L No	Sand Bar_Code	RL (m)	Area in sq.m.	Sand Thickn ess in m.	Sand Volum e in M. Cum
Estimation of Sand Resources in Pre monsoon period & Post monsoon period of Beas River											
1	PR_KT_DW_BS_01	226.00	102072	3	0.306	1	PO_KT_DW_B S_01	226.83	46851	3	0.141
2	PR_KT_DW_BS_02	226.00	38522	2	0.089	2	PO_KT_DW_B S_2	226.80	316255	3	0.886
3	PR_KT_DW_BS_03	226.14	72022	1	0.050						0.000
4	PR_KT_DW_BS_04	226.15	174723	3	0.524	3	PO_KT_DW_B S_04	226.52	24115	2	0.037
5	PR_KT_DW_BS_05	226.11	134174	2	0.263	4	PO_KT_DW_B S_05	226.37	65292	3	0.196
6	PR_KT_DW_BS_06	226.00	46433	3	0.139						
7	PR_KT_DW_BS_07	225.95	154654	3	0.464						
8	PR_KT_DW_BS_08	225.89	136548	3	0.397	5	PO_KT_DW_B S_08	226.04	50029	1	0.030
9	PR_KT_DW_BS_09	225.12	50901	3	0.153	6	PO_KT_DW_B S_9	225.37	46555	1	0.043
10	PR_KT_DW_BS_10	225.11	131964	1	0.162						
11	PR_KT_DW_BS_11	225.00	109834	3	0.330						
12	PR_KT_DW_BS_12	224.92	48150	3	0.144						
13	PR_KT_DW_BS_13	224.85	38319	3	0.115						
						7	PO_KT_DW_B S_14(II)	219.51	11281	3	0.034
						8	PO_KT_DW_B S_14(III)	220.12	26475	3	0.079
						9	PO_KT_DW_B S_14(IV)	219.88	7523	3	0.023
						10	PO_KT_DW_B S_14(V)	219.70	4669	2	0.008
						11	PO_KT_DW_B S_14(VI)	219.21	6892	3	0.021
						12	PO_KT_DW_B S_14(VII)	218.89	11506	3	0.035
						13	PO_KT_DW_B S_14(VIII)	218.78	13397	3	0.040
						14	PO_KT_DW_B S_14(X)	218.90	15772	3	0.047
						15	PO_KT_DW_B S_14(XI)	218.66	9842	3	0.030
						16	PO_KT_SL_BS_14(XIII)	218.50	34562	3	0.104
						17	PO_KT_SL_BS_14(XV)	217.74	20111	1	0.025
						18	PO_KT_SL_BS_14(XVI)	217.20	57087	3	0.171
						19	PO_KT_SL_BS_14(XVII)	216.77	41456	3	0.124
						20	PO_KT_SL_BS_14(XVIII)	215.42	63888	3	0.192
						21	PO_KT_SL_BS_14(XIX)	215.24	9926	1	0.013



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						22	PO_KT_SL_BS_14(XX)	215.40	10550	3	0.032
14	PR_KT_SL_BS_15	215.00	74920	3	0.225	23	PO_KT_SL_BS_15	215.00	76499	3	0.229
15	PR_KT_SL_BS_16	215.00	118421	3	0.355	24	PO_KT_SL_BS_16	215.00	54409	3	0.163
						25	PO_KT_SL_BS_16A	214.81	54683	3	0.164
16	PR_KT_SL_BS_17	214.12	24373	3	0.073	26	PO_KT_SL_BS_17	214.36	24744	3	0.074
17	PR_KT_SL_BS_18	213.24	73595	3	0.221	27	PO_KT_SL_BS_18	213.72	73025	3	0.219
18	PR_KT_SL_BS_19	213.00	177638	3	0.533	28	PO_KT_SL_BS_19	213.00	176609	3	0.530
19	PR_KT_SL_BS_20	213.00	13933	3	0.042	29	PO_KT_SL_BS_20	213.00	13277	3	0.034
20	PR_KT_SL_BS_21	214.11	20589	3	0.062	30	PO_KT_SL_BS_21	214.33	21546	3	0.058
21	PR_KT_SL_BS_22	213.35	18612	3	0.056	31	PO_KT_SL_BS_22	213.75	19732	3	0.059
						32	PO_KT_SL_BS_22(I)	213.11	18403	3	0.055
						33	PO_KT_SL_BS_22(II)	213.08	16390	3	0.047
						34	PO_KT_SL_BS_22(III)	213.00	8629	2	0.015
						35	PO_KT_SL_BS_22(IV)	212.93	2770	3	0.007
						36	PO_KT_SL_BS_22(V)	212.20	52030	3	0.156
						37	PO_KT_SL_BS_22(VI)	211.00	3607	3	0.011
						38	PO_KT_SL_BS_22(VII)	211.00	3387	3	0.010
						39	PO_KT_SL_BS_22(VIII)	210.24	3153	3	0.009
						40	PO_KT_SL_BS_22(IX)	210.06	6625	3	0.020
22	PR_KT_SL_BS_23	210.00	40484	3	0.121	41	PO_KT_SL_BS_23	210.12	40426	3	0.121
Total			1800879		4.83				1563980		4.29

Note: Among the sandbars in cross section where the thickness exceeds 3 meter, in those cases maximum of 3-meter depth is considered as per EMSMG guidelines 2020. The volume to weight conversion of Post Sandbars is given in Plate III as per different bulk density of each sandbars.

A summary of sediment load comparison between Pre and Post Monsoon period for different rivers of Kapurthala district is given in Table 7.3.

Table 7.3: Sediment load comparison between Pre and Post Monsoon period for rivers of Kapurthala district

River Name	Pre-Monsoon no of ghats	Post-Monsoon no of ghats	Pre-Monsoon Sediment Load (Mcum)	Post Monsoon Sediment Load (Mcum)	Variance (Mcum)
Beas	22	41	4.83	4.29	-0.54



Thus, in the district, about -0.54 million cum of sand has been found as a differential volume when compared between pre and post monsoon sand reserve data of the district.

7.3. Replenishment estimation based on empirical formula

The estimation of sedimentation rate based on empirical formula need critical analysis of different factors related to the LULC property of the catchment area, slope geometry, sediment erosion factor of catchment litho-type. This will help to assess replenishment rate more precisely.

Replenishment studies based on empirical formula for existing mining leases have also been conducted and are given in Table 7.4.

Table 7.4: Replenishment rate estimation

Location	River Name	Lease Area	Surface RL Before mining	Mine out Thickness	Mine out Volume	Annual Rainfall-2020	Estimated Replenished Volume as per Dandy-Bolton
		m ²	M	m	cum	m	cum
Beas	Safderpur	42900	217.00	2.00	85800.00	0.71	61776.00

(Note: The details of Safderpur site is mentioned in page no. 131 of Annexure A).

7.4. Total potential of mining of minor minerals in the river bed due to Annual Deposition

For the purpose of estimating mineable mineral potential, the thickness of the sand bar considered extractable based on base flow level is given in Table 7.5.

Table 7.5: River wise Thickness of sand bar considered mineable

River Name	Considered Mining Thickness (m)
Beas	1-3 m (based on Cross-Section Study)

Based on geomorphology, geology, climate and mineable thickness of sand bar the annual deposition of riverbed minerals (sand) has been estimated.

Sand bar area recommended for mineral concession in the table is calculated as per the Enforcement and Monitoring Guidelines for Sand Mining (EMGSM) 2020. As per guidelines, mining depth restricted to 3- meters depth and distance from the bank is 1/4th of river width and not less than 7.5 meters. Also mining is prohibited up



to a distance of 1 kilometer (1 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side. The Total minable mineral potential is given in Table 7.6.

Table 7.6: Total mineable mineral potential

Sl. No.	River or Stream	Potential area (sq.m)	Potential area (Ha.)	Average Mining Thickness	Volume in MCum	60% of Volume in MCum	Bulk Density g/cc	Mineable Mineral Potential Million MT
1	Beas	13,91,800	139.18	3	4.18	2.51	1.56	3.92

Note: The potential area has been mentioned for every potential site in Ha in plate II (pages 74 -82). The average mining thickness is mean of data of thickness as mentioned in table 7.2.

Note: The average depth of sandbars is taken 3 meter because, in some sandbars depth is above 3 m and in few it is below 3m. However, the mining will not exceed 3m.

7.4.1 No Mining Zone

Criteria for identification of no mining zones

- i. Benchmark (BM) with respect to mean Sea Level (MSL) should be established in mining channel reaches (MCR) below which no mining shall be allowed.
- ii. Mining is to be permitted only in the central 3/4th of the channel where deposition/aggradation of the material has been identified whereas the remaining 1/4 th width needs to be kept as no mining zone for the protection of banks.
- iii. Identifying the mining and no mining zones shall be done after determining the area of sensitivity by ascertaining the distance of the mining area from the protected areas, forest areas, bridges, important structures, habitation etc. and based on the sensitivity the area needs to be defined in sensitive and non-sensitive categories.
- iv. As far as possible mining operations should be avoided in the sensitive areas unless local conditions require otherwise. Such deviations may only be of temporary nature and are to be permitted by the DLTF after recording the reasons for the same.

Table 7.7: Sand resources in no mining zone

River Name	Total Sand Resources (Mcum)	Total Sand Resources Million MT	Total Potential Sand Resources (Mcum)	Total Potential Sand Resources Million MT	Total No Mining Resource (Mcum)	Total No Mining Resource Million MT
Beas	4.29	6.69	4.18	6.52	0.11	0.17

Note: Total Sand resource is mentioned in table no. 7.2 (page no. 55-56) & Total Potential sand resources is mention in table no. 7.7(page no. 58), Bulk density: 1.56 g/cc.



7.5. Detail of potential source/sites of River Bed Material

The potential sand block demarcated on Beas River is given in **Plate II**.

Potential sensitive sites for mining which are near to forests, protected areas, habitation, bridges etc., are avoided. The suitability of such sites have been confirmed based on Sub-divisional committee's observation.

The list of mining leases as per the recommendation of the Committee is given as **Annexure E**.

The Sub-Divisional Committee had made recommendations regarding the suitability of all potential mining sites and also recorded the reason for approving the specific mining leases on the basis of its field inspections. The details regarding cluster and contiguous cluster formation are provided at **Annexure A**.



8 Transport

The Kapurthala district is well connected with other district of Punjab by good road networks. Besides the National Highway (Sher Shah Suri Marg, connecting Mughal Sarai with Amritsar) there are following the State Highways which connects nearby districts towns:

- Kapurthala Jalandhar Road
- Kapurthala-Sultanpur Lodhi-Zira Road
- Kapurthala-Nakodar Road
- Kapurthala-Tanda Road
- Kapurthala-Tarn Taran Road
- Sultanpur Lodhi-Nakodar Road
- Phagwara - Hoshiarpur Road
- Phagwara-Nakodar Road, and
- Phagwara-Nawanshahr Road

Kapurthala district lies in the Firozpur Division of Northern Railway. Two railway lines passing through this district are:

- Amritsar-Saharanpur-Mughal Sarai Rail Line
- Firozpur Cantt.- Jalandhar City Rail Line

The major transportation routes for sand evacuation from the major sand producing rivers are shown in Figure no. 8.1.

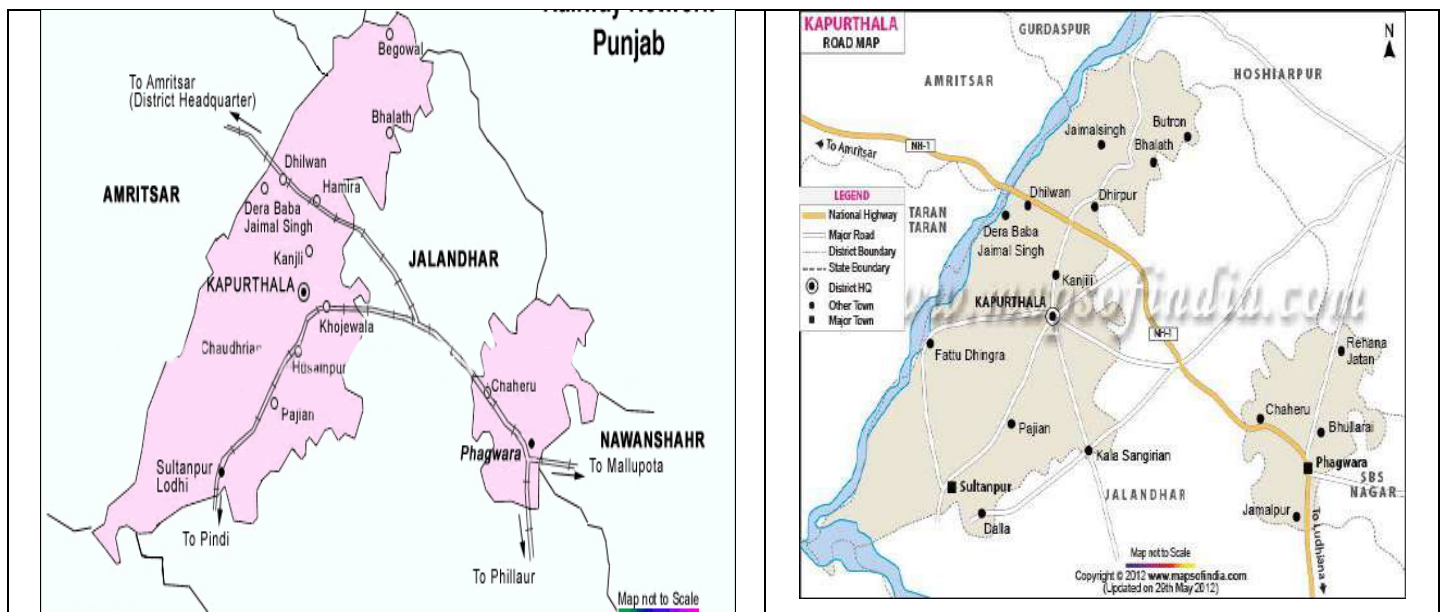


Figure No. 8.1: Transport map of Kapurthala District



9 Remedial measure to mitigate the impact of mining

9.1. Environmental Sensitivity

The district represents a unique geo- environmental perception. As human population expands, forests are being depleted for the extension of agricultural lands, introduction of new settlements, roadways etc. The growing changes is coming in the wake of urbanization and industrialization leave deep impression on the hill ecosystem; disrupting normal functioning.

Due to unprecedented growth of population during the last few, nature has started reacting sharply to the accumulated human guilt. Soil erosion and its conservation play an important role. Because of the presence of very thin soil cover plays an important role in the socio-economic development.

The adverse effect of this unscientific mining is realized in the form of landslide, removal of soil cover, siltation of river beds leading to frequent floods, endangering the lives and properties of local inhabitants.

9.2. Sand mining Impact

Another serious environmental problem around the globe in recent years is of illegal Sand mining. Sand mining is a process of extraction of sand from an open pit, river bed, sea beaches, ocean floor, river banks, deltas and island dunes. The extracted sand could be utilized for various types of manufacturing, such as concrete used in the construction of building and other structures. The sand can also be used as an abrasive. The demand for sand increase as population grows also urbanization with time. The high level of demands has offer led to the use of unsustainable sand mining process for speedy urbanization resulted in illegal mining.

All though most jurisdictions have legal limit on the location and volume of sand that can be mined, illegal sand extraction is following in many parts of the country due to rapid urbanization and industries.

Removal or extraction of too much sand from rivers leads to erosion shrinking of river banks. Deltas can recede due to sand mining. These destructive effects of sand mining ultimately result in loss of fertile land and property. It also destabilized the ground and causes the failure of engineering structures for civilization.

In-stream mining directly alters the channel geometry and bed elevation. By removing sediment from the channel, in-stream material extraction disrupts the preexisting balance between sediment supply and transporting capacity, typically inducing incision upstream and downstream of the extraction site. The resultant incision alters the frequency of floodplain inundation along the river courses, lowers valley floor water tables and frequently leads to destruction of bridges and channelization structures.



Sand Mining in beaches disturbs the ecosystem of different fauna of the beaches. The sand mining from natural barriers, made up of sand, causes flooding of the natural habitat. The sand mining activity destroys the aesthetic beauty of beaches and river bank and makes the ecosystem unstable. If there are popular tourist destination, tourism potential of such areas will lose.

It could be concluding that there has been little in-depth research in to the environmental and social also political effect of land use practice and calls for urgent redressed by the competent authority.

9.3. Remedial measure

9.3.1. Sustainable Mining Practices:

- The depth of mining in Riverbed shall not exceed 3 meter or water level whichever is less, even if the Joint Inspection Committee certifies about excessive deposit or over accumulation of mineral.
- Mining shall be done in layers of 1-meter depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next layers.
- No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations.
- No blasting shall be resorted to in River mining and without permission at any other place.

9.3.2. Monitoring the Mining of Mineral and its Transportation:

- For each mining lease site, the access should be controlled in a way that vehicles carrying mineral from that area are tracked and accounted for.
- There should be regular monitoring of the mining activities in the State to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concessions Rules framed by the State Government.

9.3.3. Noise Management:

- Noise arising out of mining and processing shall be abated and controlled at source to keep within permissible limit.
- Restricted sand mining operation has to be carried out between 6 am to 7 pm.



9.3.4. Air Pollution and Dust Management:

- The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly.
- Air Pollution due to dust, exhaust emission or fumes during mining and processing phase should be controlled and kept in permissible limits specified under environmental laws.
- The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.

9.3.5. Bio-Diversity Protection:

- Restoration of flora affected by mining should be done immediately. Twice the number of trees destroyed by mining to be planted preferably of indigenous species. Each EC holder should plant and maintain for lease period at least 5 trees per hectare in area near lease.
- No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made there under.
- Protection of turtle and bird habitats shall be ensured.
- No felling of tree near quarry is allowed. For mining lease within 10km of the National Park / Sanctuary or in Eco-Sensitive Zone of the Protected Area, recommendation of Standing Committee of National Board of Wild Life (NBWL) have to be obtained as per the Hon'ble Supreme Court order in I.A. No. 460 of 2004.
- Spring sources should not be affected due to mining activities. Necessary Protection measures are to be incorporated.

9.3.6. Management of Instability and Erosion:

- Removal, stacking and utilization of top soil in mining are should be ensured. Where top soil cannot be used concurrently, it shall be stored separately for future use keeping in view that the bacterial organism should not die and should be spread nearby area.
- The EC should stipulate conditions for adequate steps to check soil erosion and control debris flow etc. by constructing engineering structures
- Use of oversize material to control erosion and movement of sediments
- No overhangs shall be allowed to be formed due to mining and mining shall not be allowed in area where subsidence of rocks is likely to occur due to steep angle of slope.



- No extraction of boulder / sand in landslide prone areas.
- Controlled clearance of riparian vegetation to be undertaken.

9.3.7. Waste Management:

- Site clearance and tidiness is very much needed to have less visual impact of mining.
- Dumping of waste shall be done in earmarked places as approved in Mining Plan.
- Rubbish burial shall not be done in the rivers.

9.3.8. Pollution Prevention:

- Take all possible precautions for the protection of environment and control of pollution.
- Effluent discharge should be kept to the minimum and it should meet the standards prescribed.

9.3.9. Protection of Infrastructure:

- Mining activities shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical, and archeological importance.
- For carrying out mining in proximity to any bridge or embankment, appropriate safety zone should be worked out on case-to-case basis, taking into account the structural parameters, location aspects and flow rate, and no mining should be carried out in the safety zone so worked out.

9.3.10. Baseline surveys and reclamation plan on completion of mining operations

- As per statute all mines/quarries are to be properly reclaimed before the final closure of the mine.
- A baseline survey of conditions before commencement of mining operations is to be prepared. This should include relevant cross-section data between two permanent benchmarks set back from the top of bank. The elevations should be referenced on the basis of the established benchmark marks.
- The proposed mining cross-section data should be plotted over the baseline data to depict the vertical extent of the proposed excavation.
- The cross-section of the fully replenished bar should be the same as that of the baseline data.



- A planimetric map showing the aerial extent of the excavation and extent of the riparian buffers must be prepared.
- A plantation plan should be prepared by the concerned DFO as prescribed above.
- Proper monitoring plan is to be prepared and implemented.

9.4. Risk assessment and disaster management plan

Risk analysis is the systematic study of risks encountered during various stages of mining operation. Risk analysis seek to identify the risks involved in mining operations, to understand how and when they arise, and estimate the impact (financial or otherwise) of adverse outcomes. The sand mining operation in the district is mainly done manually.

9.4.1. Identification of risk due to river sand mining

There is no land degradation due to mining activities as mining is done only on river bed dry surface. There will be no OB or waste generation as the sand is exposed in the river bed and is completely saleable. There will be neither any stacking of soil nor creation of OB dumps. The mining activity will be carried out up to a maximum depth of 3m below the surface level. So, there is no chance of slope failure, bench failure in the mines. However, there are some identified risk in the mining activity which are as below:

1. Accident during sand loading and transportation
2. Inundation/ Flooding
3. Quick Sand Condition

9.4.2. Measures to prevent accidents during loading and transportation:

- During the loading truck would be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.
- The workers will be provided with gloves and safety shoes during loading.
- Opening of the side covers of the truck should be done carefully and with warning to prevent injury to the loaders.
- Mining Operations will be takes place during daylight only.
- The truck will be covered with tarpaulin and maintained to prevent any spillage.
- To avoid danger while reversing the trackless vehicles especially at the embankment and tipping points, all areas for reversing of Lorries should be made man free as far as possible.



- All transportation within the main working will be carried out directly under the supervision and control of the management.
- Overloading should not be permitted and the maximum permissible speed limit should be ensured.
- There will be regular maintenance of the trucks and the drivers will have valid driving license.

9.4.3. Measures to prevent incidents during Inundation/ Flooding:

To minimize the risk of flooding/ inundation following measures will be undertaken:

- Mining will be completely closed during the monsoon months.
- Proper weather information particularly on rain should be kept during the operational period of mines so that precautionary measures will be undertaken.

9.4.4. Measures for mitigation to quick sand condition:

- Quick sand zone and deep water zone will be clearly demarcated and all the mines workers will make aware of the location.
- Mining will do strictly as per the approved mining plan.

9.4.5. Disaster management plan

As the depth of mining will be maximum of 3m below the surface level considering local condition, the risk related to mining activity is much less. The mining operation will be carried out under the supervision experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS. All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955 and other laws applicable to mine will strictly be complied. During heavy rainfall and during the monsoon season the mining activities will be closed. Proper coordination with Irrigation Department should be maintained so that at the time of releasing water, if any, from the dam suitable warning/information is given in advance. Special attention and requisite precautions shall be taken while working in areas of geological weakness like existence of slip, fault etc. The mining site will be supplied with first aid facilities and the entire mines worker will have access to that.



10 Conclusion:

1. It has been observed during the preparation of district survey report that the district does not have any in-situ minor mineral occurrences as per the till date studies being carried out by various authorities and agencies. Riverbed sand is the only minor minerals of Kapurthala District.
2. The replenishment study has been carried out during the preparation of this DSR after analyzing datasets of pre monsoon period & post monsoon period of year 2022.
3. Both field-based surveys coupled with satellite imagery study and empirical studies were carried out to determine the rate of replenishment in each river of the district.
4. The study reveals potential sand resources of 4.18 Million cum on Beas River. Total resource blocked due to no mining criteria is about 0.11 Million cum. Therefore, a mineable resource which 60% of the potential resource is of 2.51 Million cum which is comes to about 3.92 Million MT after considering bulk density of sand of 1.56 g/cc. **(The total potential sand resources and 60% minable resources is mentioned in table no. 7.6 & No mining area is mentioned in table no. 7.7).**

Sr. No	Source (1)	Total mining potential (Million Cum) (2)	Quantity of Minerals in No Mining (Million Cum) (3)	Mineable quantity (Million Cum) (4)=(2)-(3)	Bulk Density (g/cc) (5)	Net Mineable qty. as per EMGGSM (6) =0.6[(4) * (5)] MT
1	River Beas	4.29	0.11	4.18	1.56	3.92
	Total	4.29	0.11	4.18	1.56	3.92

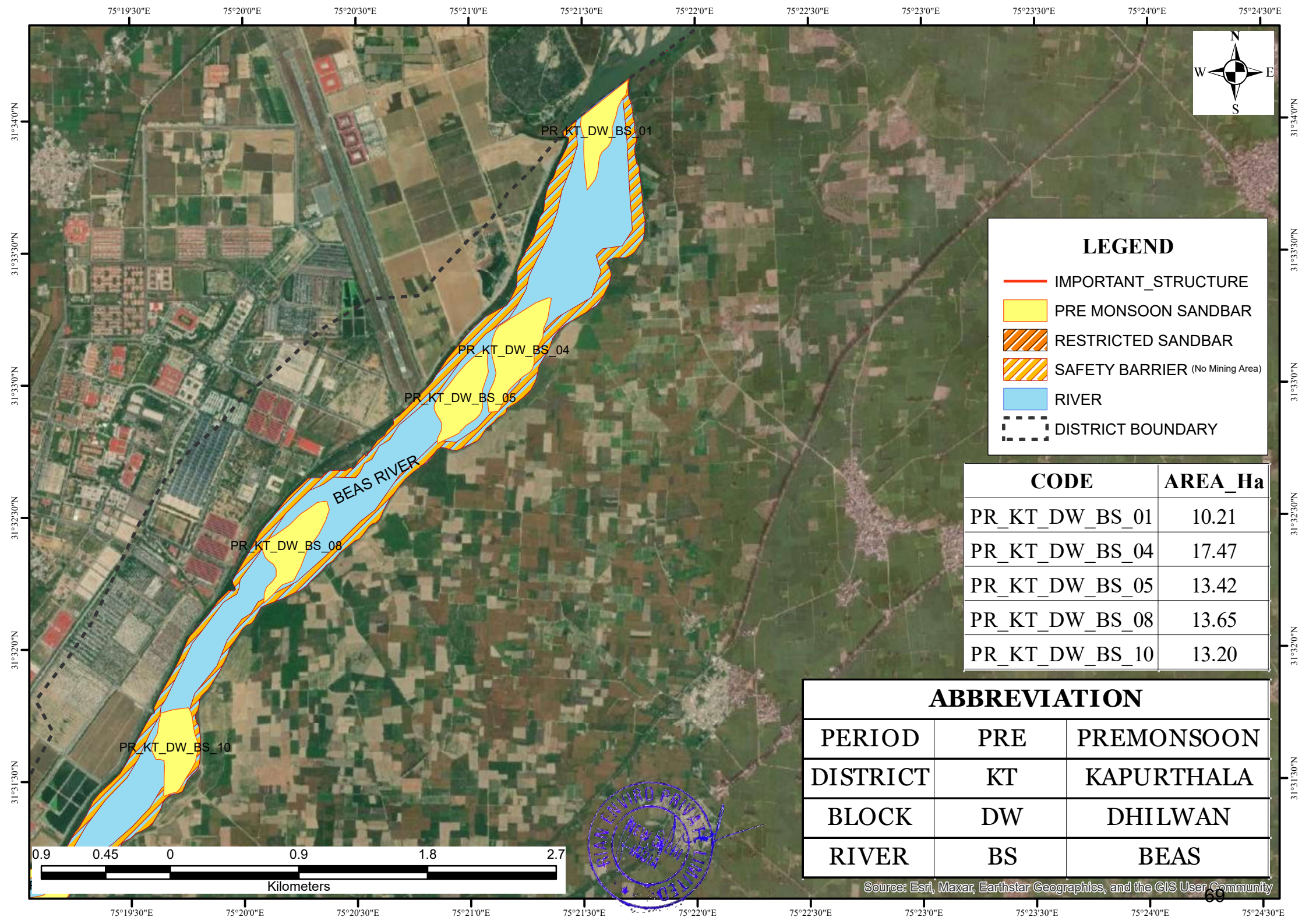
Note: The Beas river Sand resource is given in Table no. 7.6 & 7.7 of page no. 58.

5. It is suggested to have a periodical review along with field data acquisition during pre and post monsoon periods to record the seasonal variance of the sedimentation rate on annual basis and update this DSR in case of any abnormal findings.



Plate I
Map showing potential sandbar Pre Monsoon on
Beas River, Kapurthala District



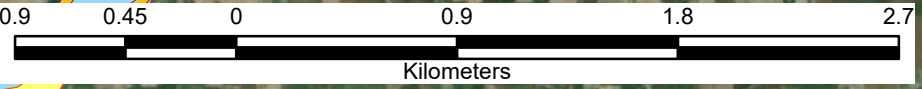


LEGEND

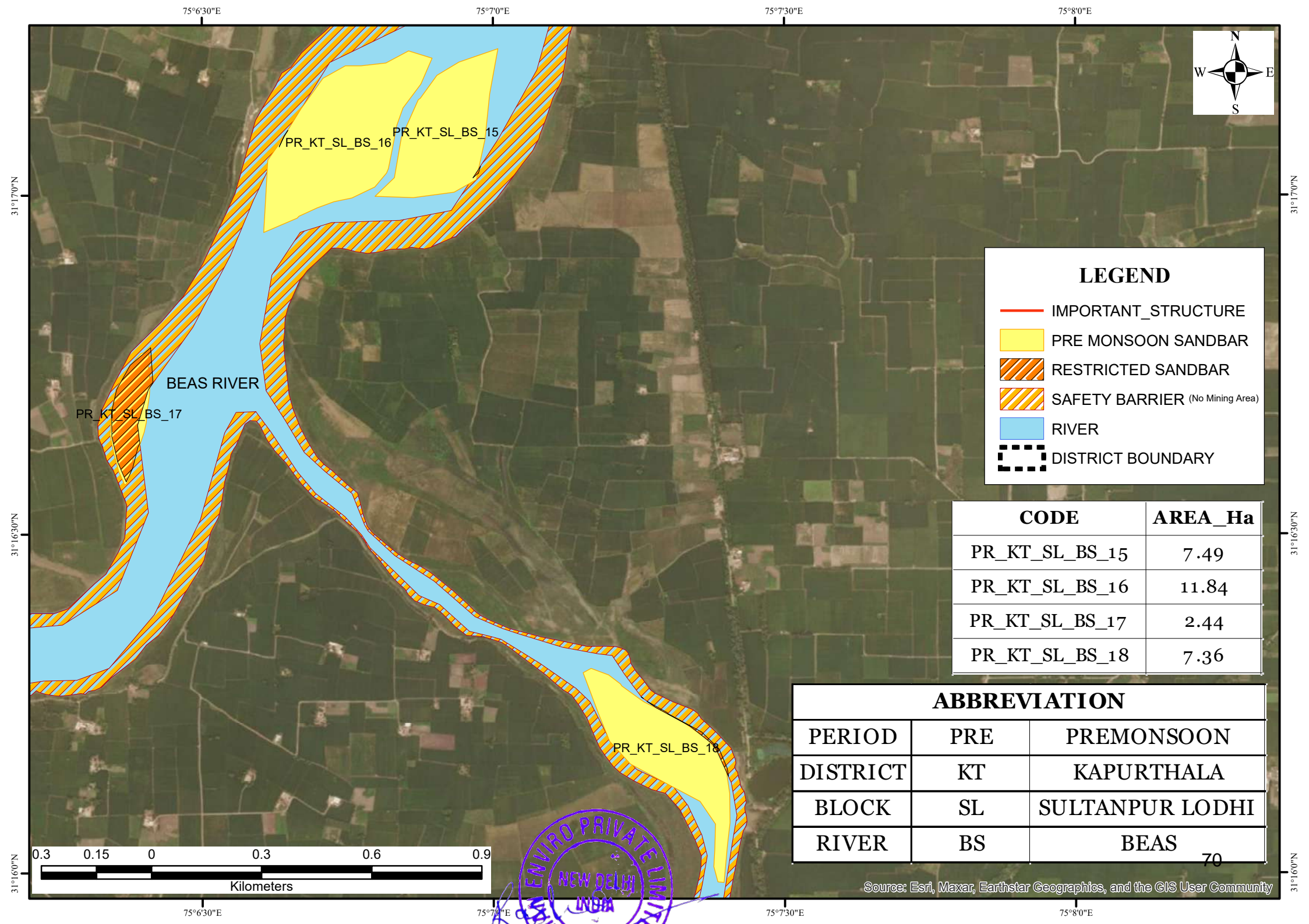
- IMPORTANT_STRUCTURE
- PRE MONSOON SANDBAR
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

CODE	AREA_Ha
PR_KT_DW_BS_01	10.21
PR_KT_DW_BS_04	17.47
PR_KT_DW_BS_05	13.42
PR_KT_DW_BS_08	13.65
PR_KT_DW_BS_10	13.20

ABBREVIATION		
PERIOD	PRE	PREMONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	DW	DHILWAN
RIVER	BS	BEAS



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

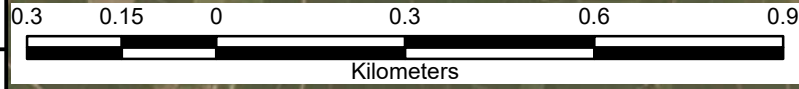


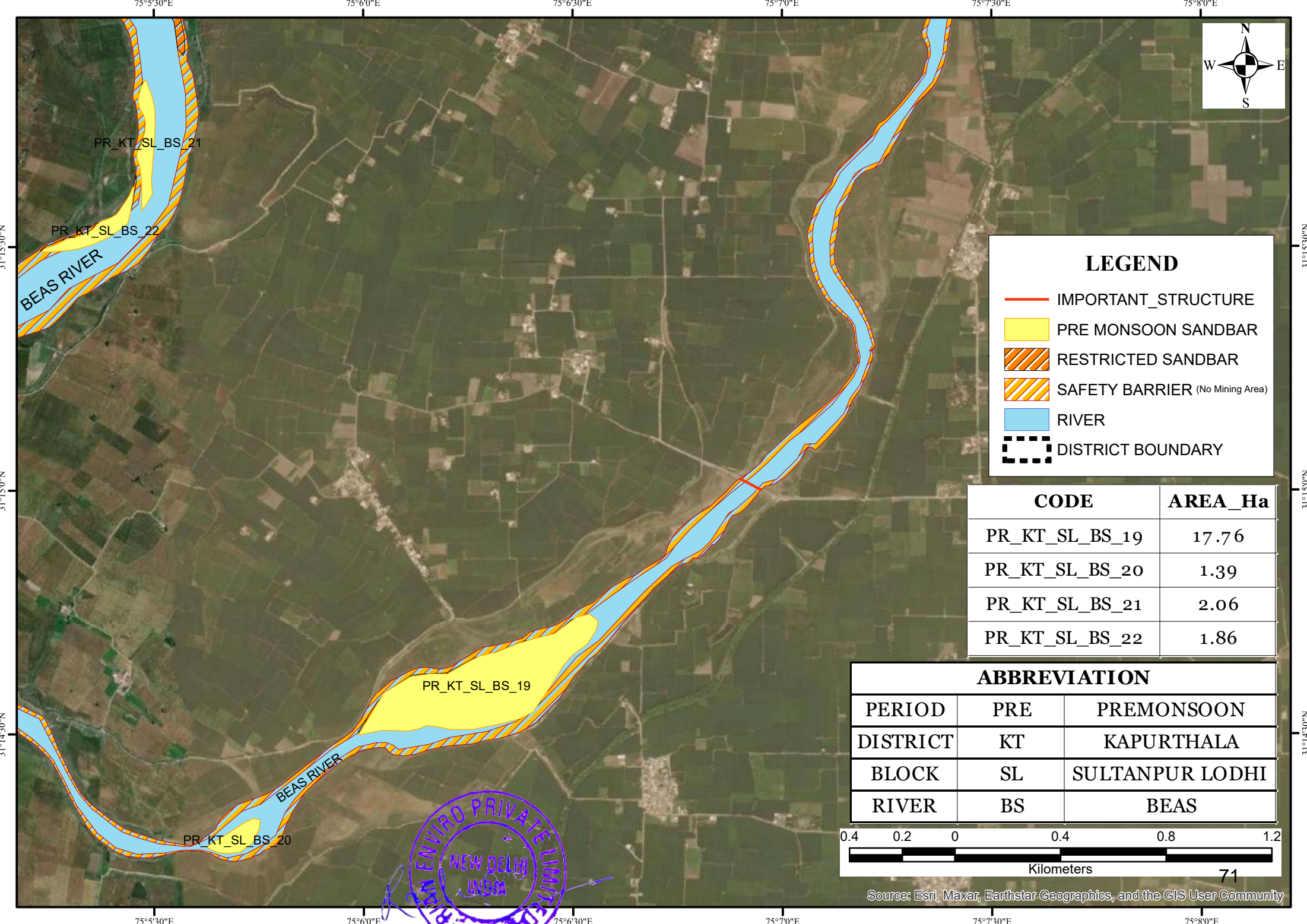
LEGEND

- IMPORTANT_STRUCTURE
- PRE MONSOON SANDBAR
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

CODE	AREA_Ha
PR_KT_SL_BS_15	7.49
PR_KT_SL_BS_16	11.84
PR_KT_SL_BS_17	2.44
PR_KT_SL_BS_18	7.36

ABBREVIATION		
PERIOD	PRE	PREMONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS



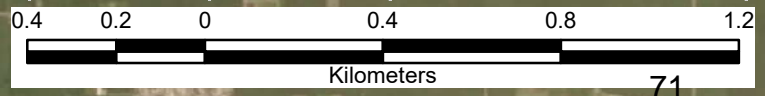


LEGEND

- IMPORTANT_STRUCTURE
- PRE MONSOON SANDBAR
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

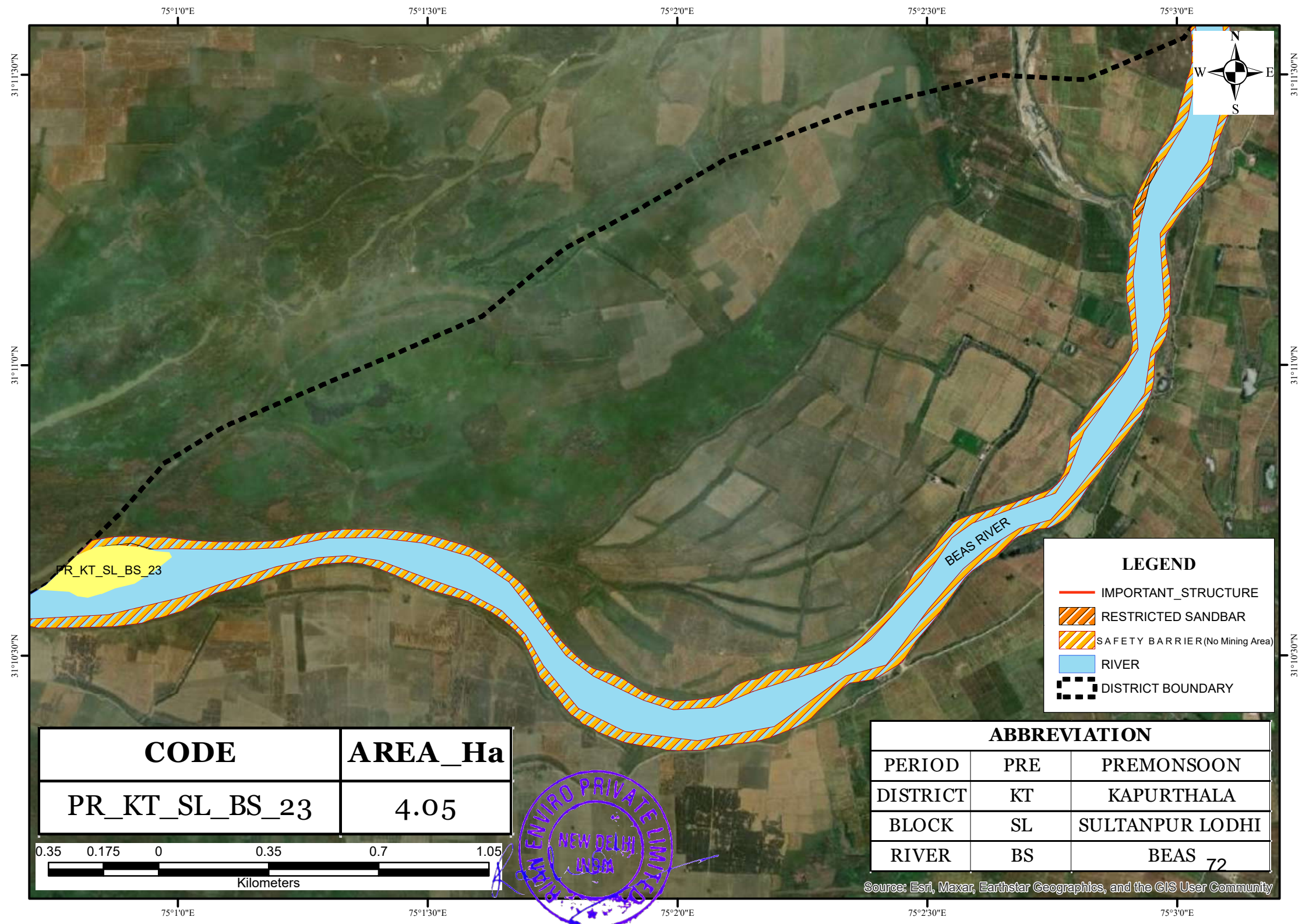
CODE	AREA_Ha
PR_KT_SL_BS_19	17.76
PR_KT_SL_BS_20	1.39
PR_KT_SL_BS_21	2.06
PR_KT_SL_BS_22	1.86

ABBREVIATION		
PERIOD	PRE	PREMONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS








Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



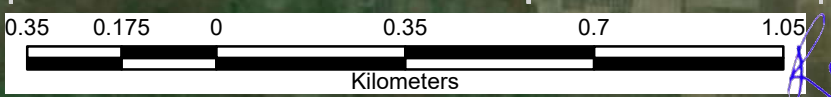


LEGEND

-  IMPORTANT_STRUCTURE
-  RESTRICTED SANDBAR
-  SAFETY BARRIER (No Mining Area)
-  RIVER
-  DISTRICT BOUNDARY

CODE	AREA_Ha
PR_KT_SL_BS_23	4.05

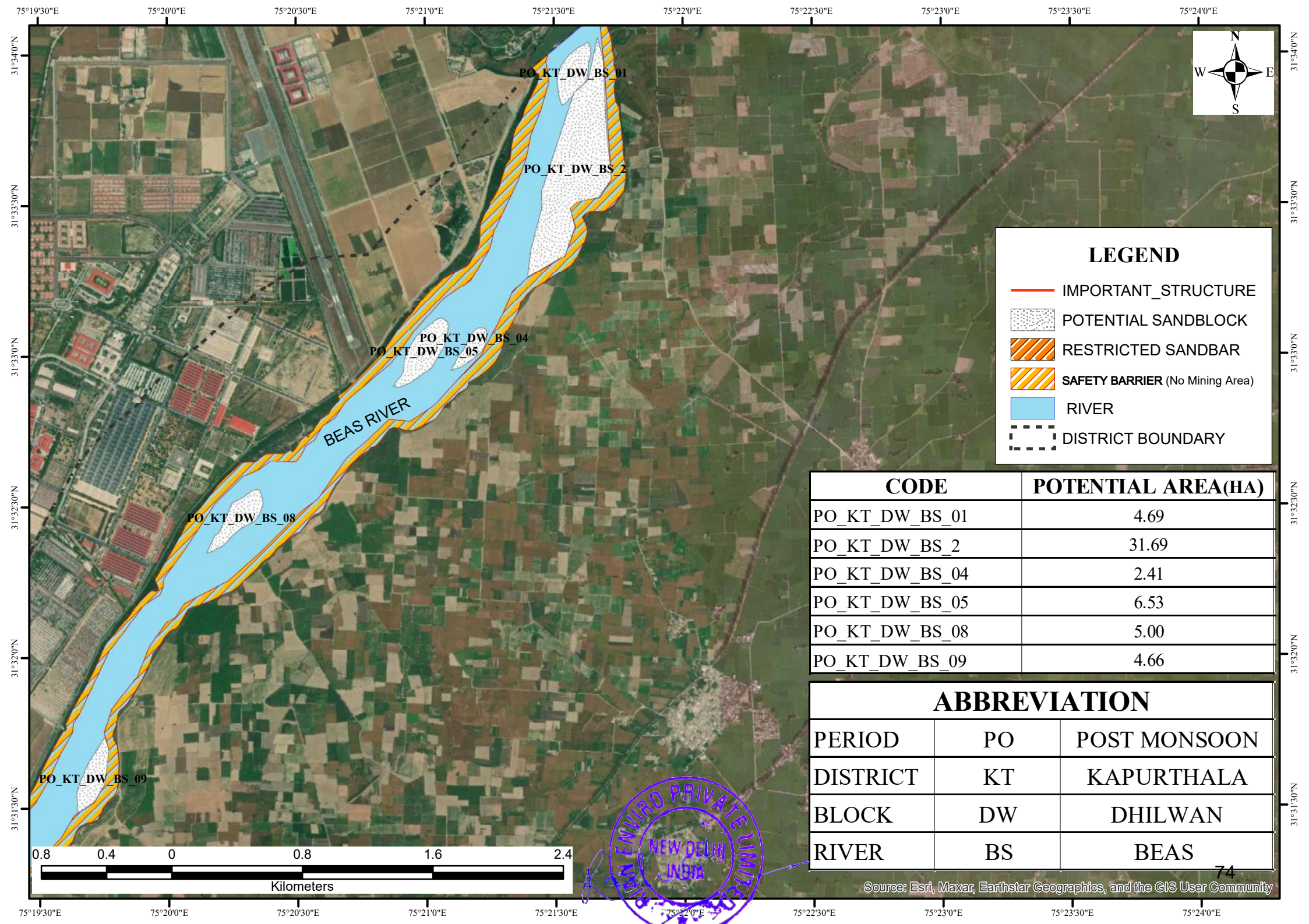
ABBREVIATION		
PERIOD	PRE	PREMONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Plate II
Map showing potential sandbar Post Monsoon on
Beas River, Kapurthala District





LEGEND

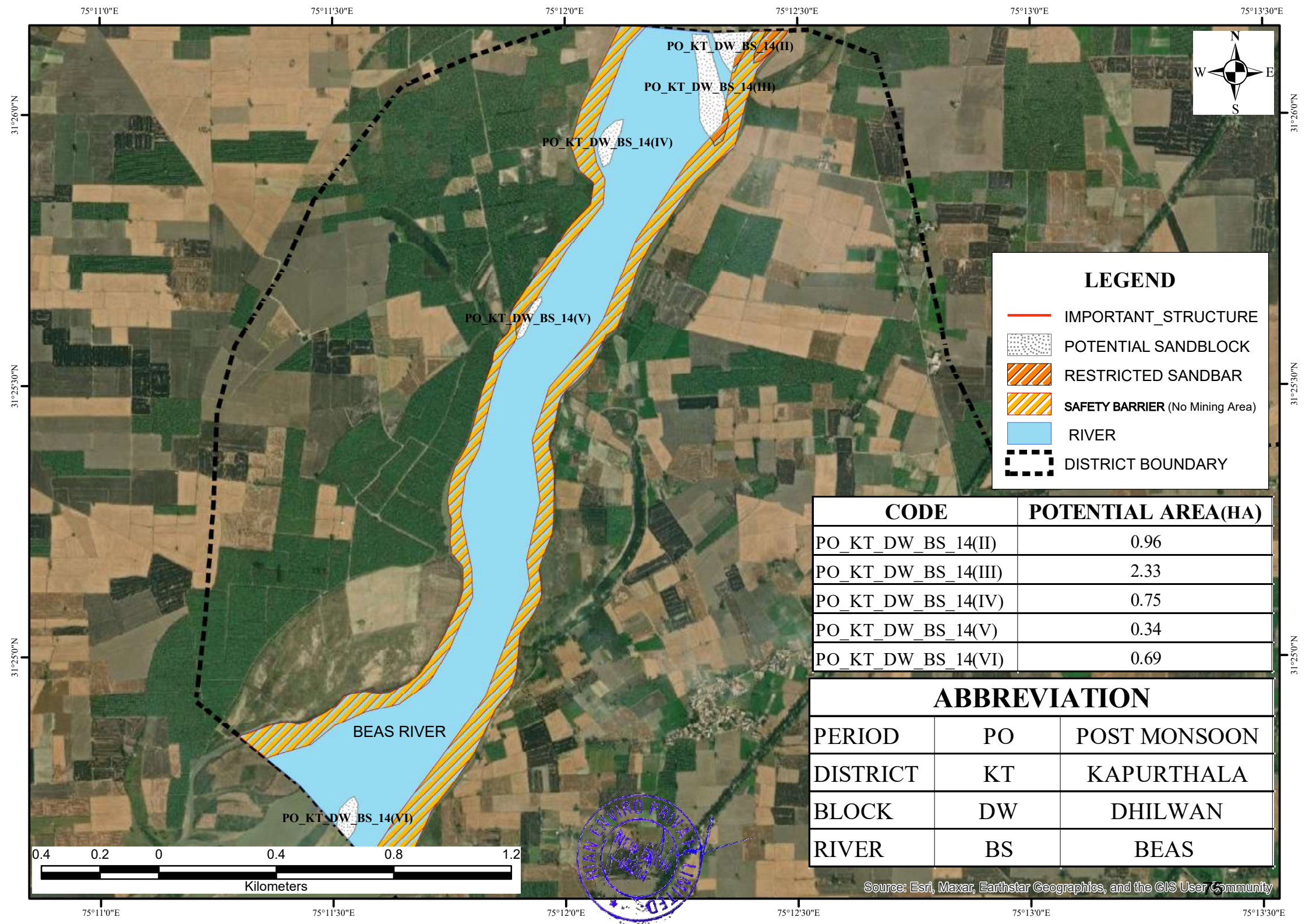
- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

CODE	POTENTIAL AREA(HA)
PO_KT_DW_BS_01	4.69
PO_KT_DW_BS_2	31.69
PO_KT_DW_BS_04	2.41
PO_KT_DW_BS_05	6.53
PO_KT_DW_BS_08	5.00
PO_KT_DW_BS_09	4.66

ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	DW	DHILWAN
RIVER	BS	BEAS



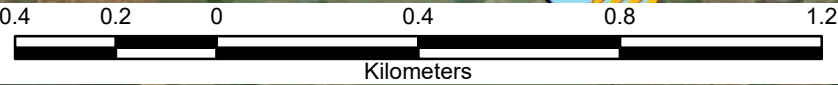


LEGEND

- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

CODE	POTENTIAL AREA(HA)
PO_KT_DW_BS_14(II)	0.96
PO_KT_DW_BS_14(III)	2.33
PO_KT_DW_BS_14(IV)	0.75
PO_KT_DW_BS_14(V)	0.34
PO_KT_DW_BS_14(VI)	0.69

ABBREVIATION		
PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	DW	DHILWAN
RIVER	BS	BEAS



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

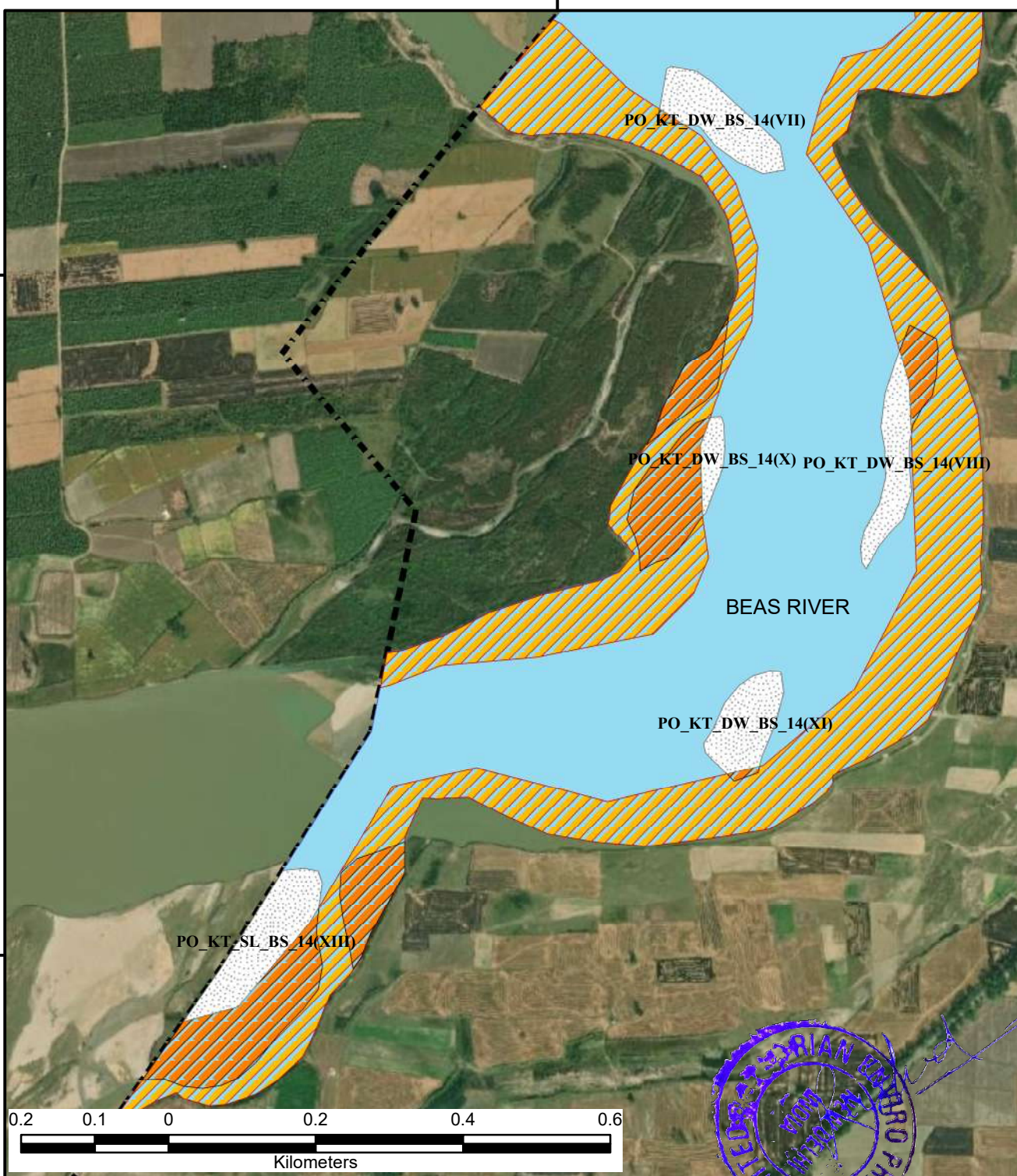


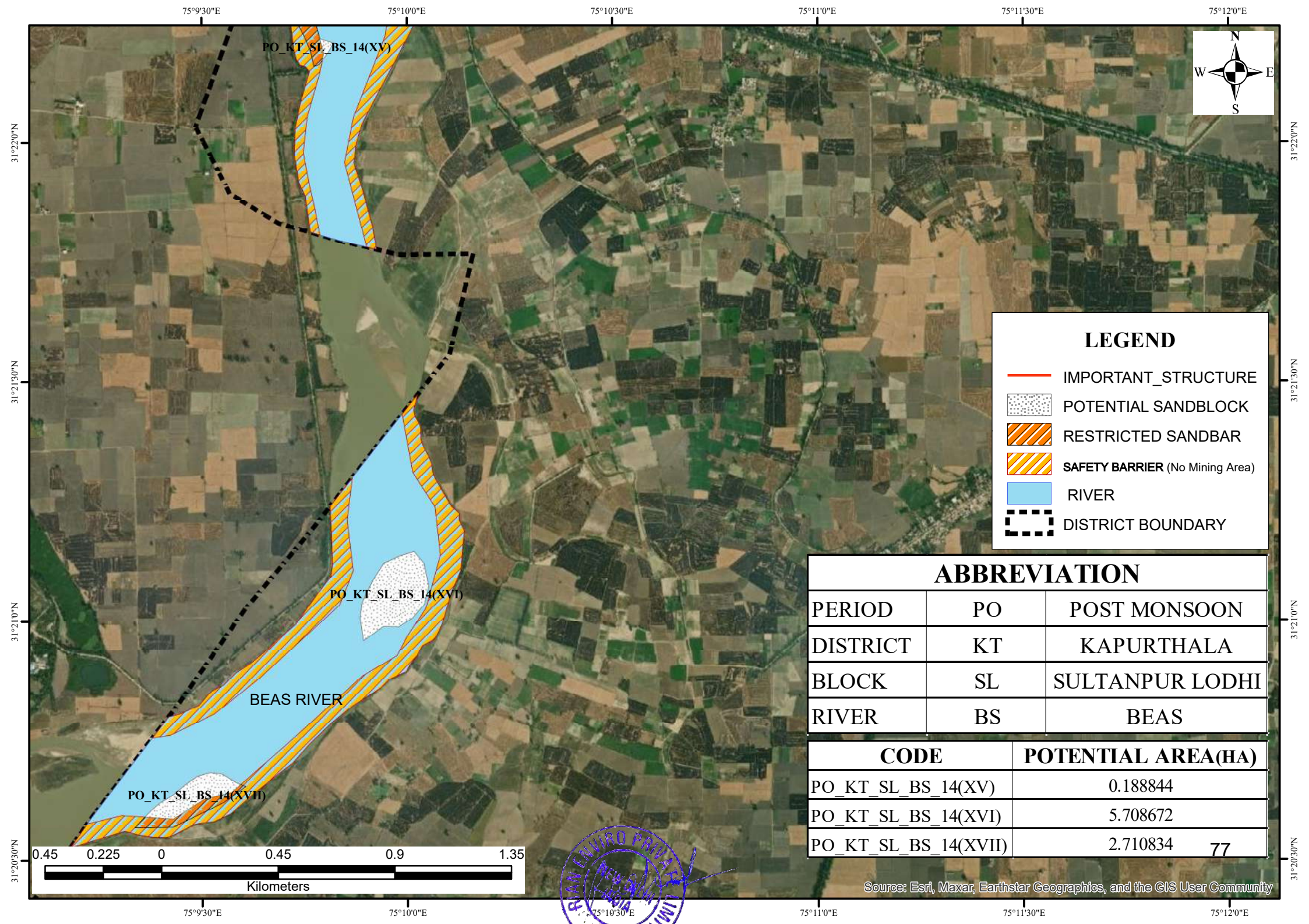
LEGEND

- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

CODE	POTENTIAL AREA(HA)
PO_KT_DW_BS_14(VII)	1.12
PO_KT_DW_BS_14(VIII)	0.91
PO_KT_DW_BS_14(X)	0.30
PO_KT_DW_BS_14(XI)	0.94
PO_KT_SL_BS_14(XIII)	1.37

ABBREVIATION		
PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	DW	DHILWAN
	SL	SULTANPUR LODHI
RIVER	BS	BEAS





LEGEND

- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

ABBREVIATION		
PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS
CODE		POTENTIAL AREA(HA)
PO_KT_SL_BS_14(XV)		0.188844
PO_KT_SL_BS_14(XVI)		5.708672
PO_KT_SL_BS_14(XVII)		2.710834

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



75°6'30"E

75°70"E

75°7'30"E

75°8'0"E









PO_KT_SL_BS_14(XVIII)

PO_KT_SL_BS_14(XIX)

BEAS RIVER

PO_KT_SL_BS_14(XX)

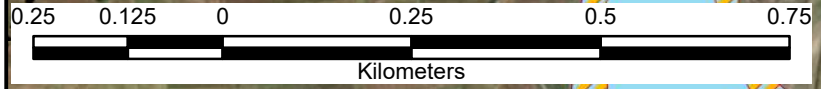
LEGEND

-  IMPORTANT_STRUCTURE
-  POTENTIAL SANDBLOCK
-  RESTRICTED SANDBAR
-  SAFETY BARRIER (No Mining Area)
-  RIVER
-  DISTRICT BOUNDARY

ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS

CODE	POTENTIAL AREA(HA)
PO_KT_SL_BS_14(XVIII)	5.73
PO_KT_SL_BS_14(XIX)	0.88
PO_KT_SL_BS_14(XX)	0.36
	78



75°6'30"E

75°70"E

75°7'30"E

75°8'0"E

31°19'00"N

31°18'30"N

31°19'00"N

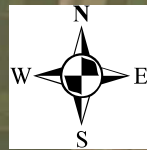
31°18'30"N

75°6'30"E

75°7'30"E

75°7'30"E

75°8'0"E









PO_KT_SL_BS_16
PO_KT_SL_BS_15
PO_KT_SL_BS_16A

BEAS RIVER

PO_KT_SL_BS_17

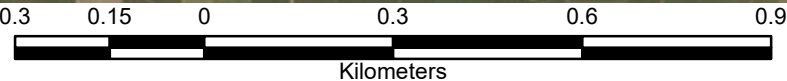
LEGEND

-  IMPORTANT_STRUCTURE
-  POTENTIAL SANDBLOCK
-  RESTRICTED SANDBAR
-  SAFETY BARRIER (No Mining Area)
-  RIVER
-  DISTRICT BOUNDARY

ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS

CODE	POTENTIAL AREA(HA)
PO_KT_SL_BS_15	7.64
PO_KT_SL_BS_16	5.44
PO_KT_SL_BS_16A	5.47
PO_KT_SL_BS_17	0.25
PO_KT_SL_BS_18	7.19
	79



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

75°6'30"E

75°7'30"E

75°7'30"E

75°8'0"E

31°17'0"N

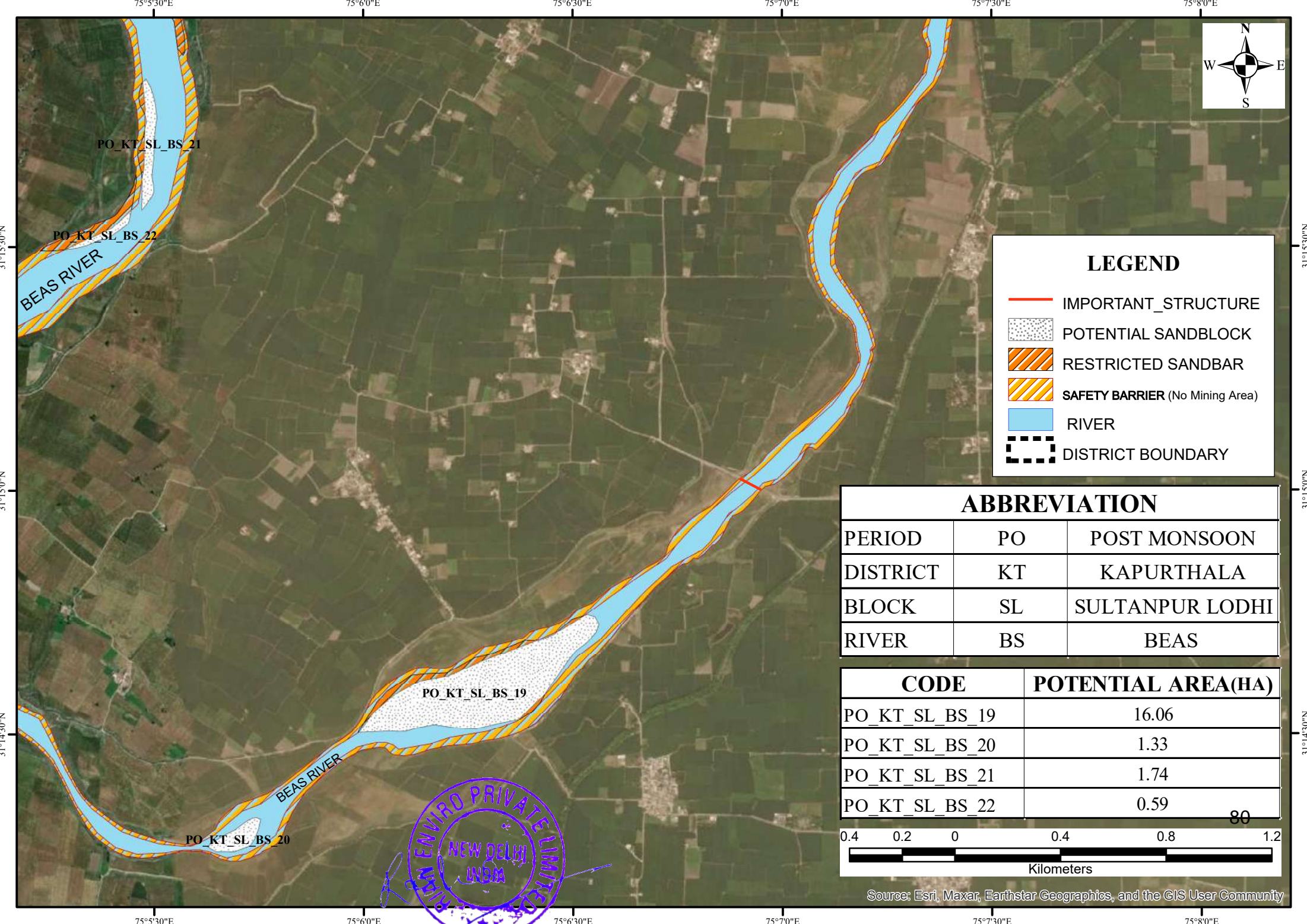
31°17'0"N

31°16'30"N

31°16'30"N

31°16'0"N

31°16'0"N



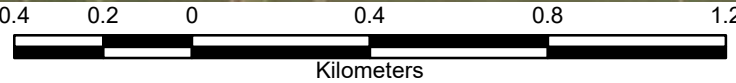
LEGEND

- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

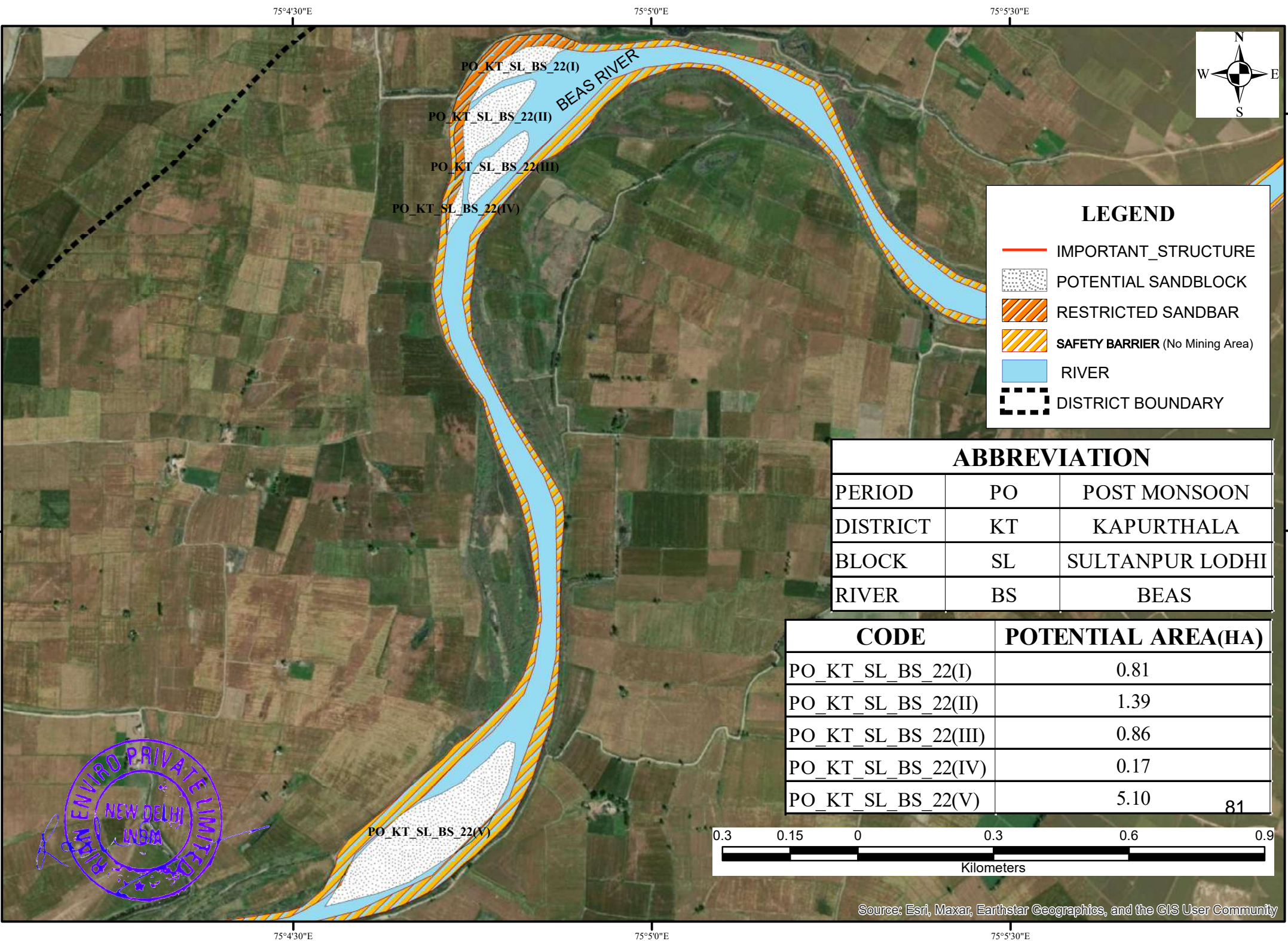
ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS

CODE	POTENTIAL AREA(HA)
PO_KT_SL_BS_19	16.06
PO_KT_SL_BS_20	1.33
PO_KT_SL_BS_21	1.74
PO_KT_SL_BS_22	0.59



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



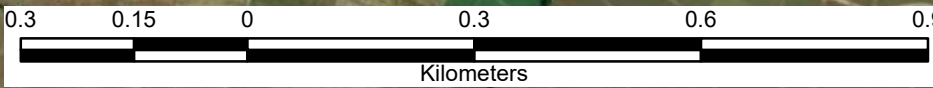
LEGEND

- IMPORTANT_STRUCTURE
- POTENTIAL SANDBLOCK
- RESTRICTED SANDBAR
- SAFETY BARRIER (No Mining Area)
- RIVER
- DISTRICT BOUNDARY

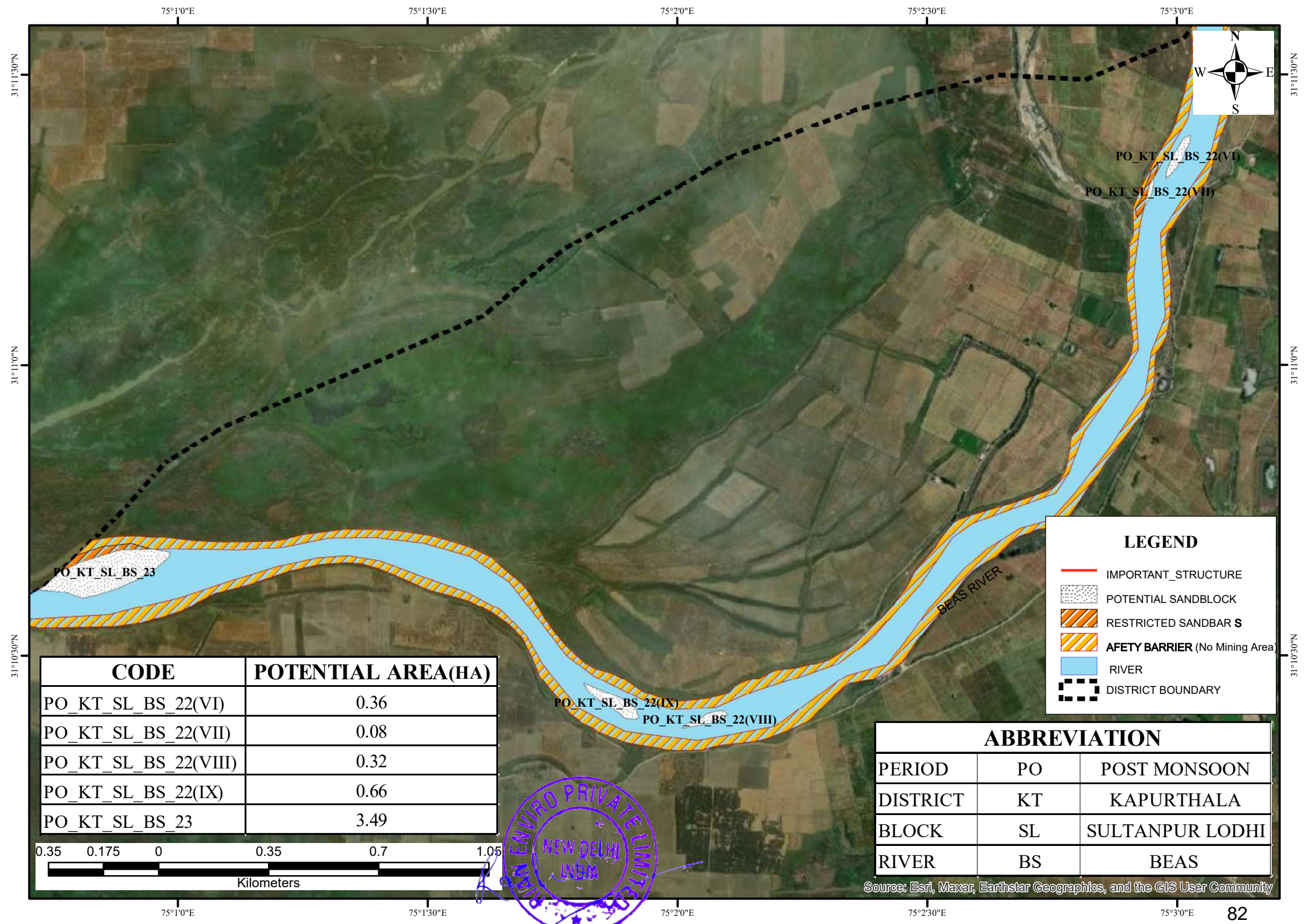
ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS

CODE	POTENTIAL AREA(HA)
PO_KT_SL_BS_22(I)	0.81
PO_KT_SL_BS_22(II)	1.39
PO_KT_SL_BS_22(III)	0.86
PO_KT_SL_BS_22(IV)	0.17
PO_KT_SL_BS_22(V)	5.10
81	



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community









PO_KT_SL_BS_22(VI)
PO_KT_SL_BS_22(VII)

PO_KT_SL_BS_23

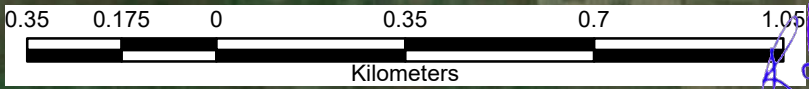
PO_KT_SL_BS_22(IX)
PO_KT_SL_BS_22(VIII)

BEAS RIVER

LEGEND

-  IMPORTANT_STRUCTURE
-  POTENTIAL SANDBLOCK
-  RESTRICTED SANDBAR S
-  SAFETY BARRIER (No Mining Area)
-  RIVER
-  DISTRICT BOUNDARY

CODE	POTENTIAL AREA(HA)
PO_KT_SL_BS_22(VI)	0.36
PO_KT_SL_BS_22(VII)	0.08
PO_KT_SL_BS_22(VIII)	0.32
PO_KT_SL_BS_22(IX)	0.66
PO_KT_SL_BS_23	3.49



ABBREVIATION

PERIOD	PO	POST MONSOON
DISTRICT	KT	KAPURTHALA
BLOCK	SL	SULTANPUR LODHI
RIVER	BS	BEAS



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

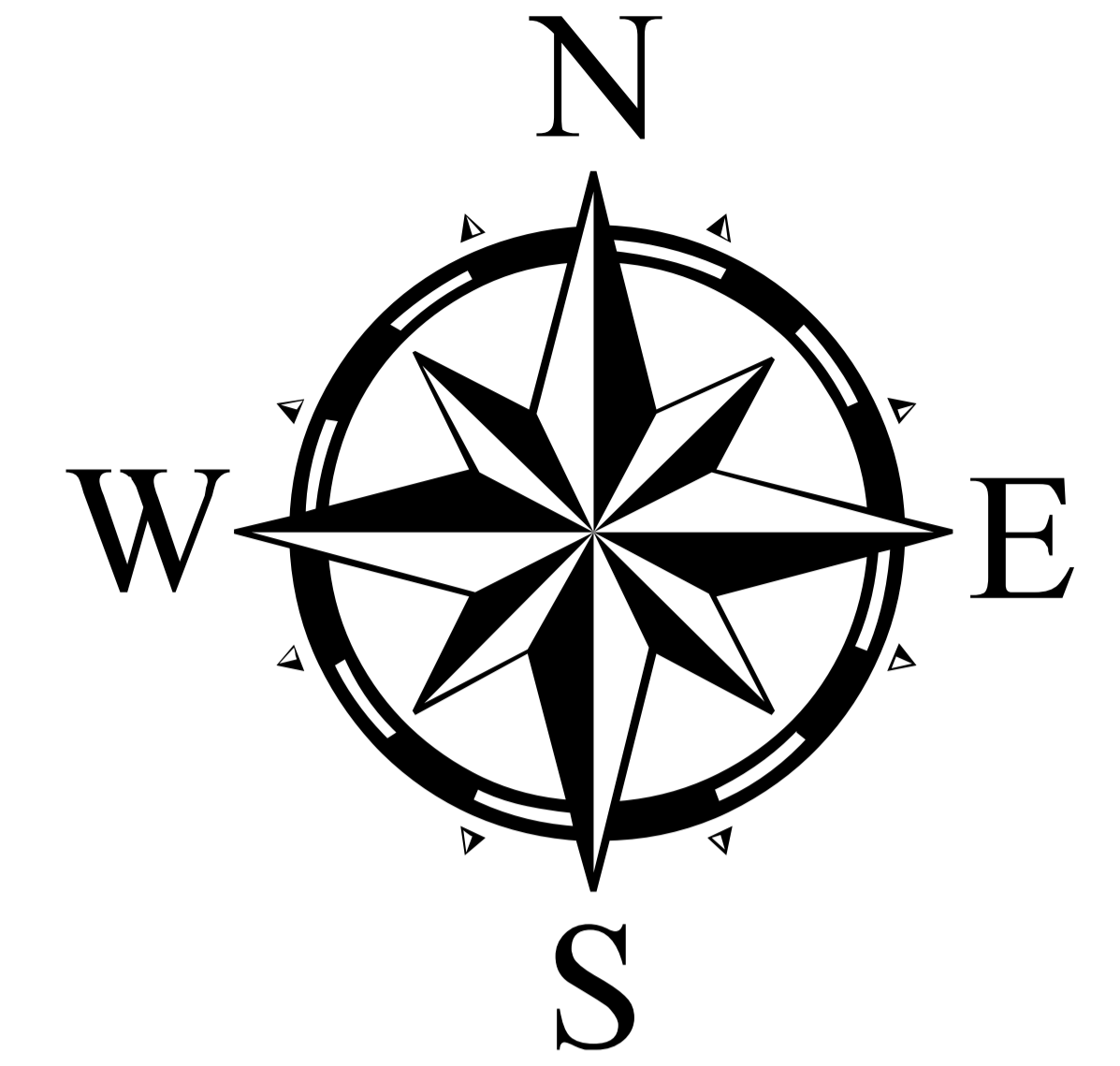
Plate III
Elevation Map & Longitudinal cross-section
(L- Section)



75°0'0"E

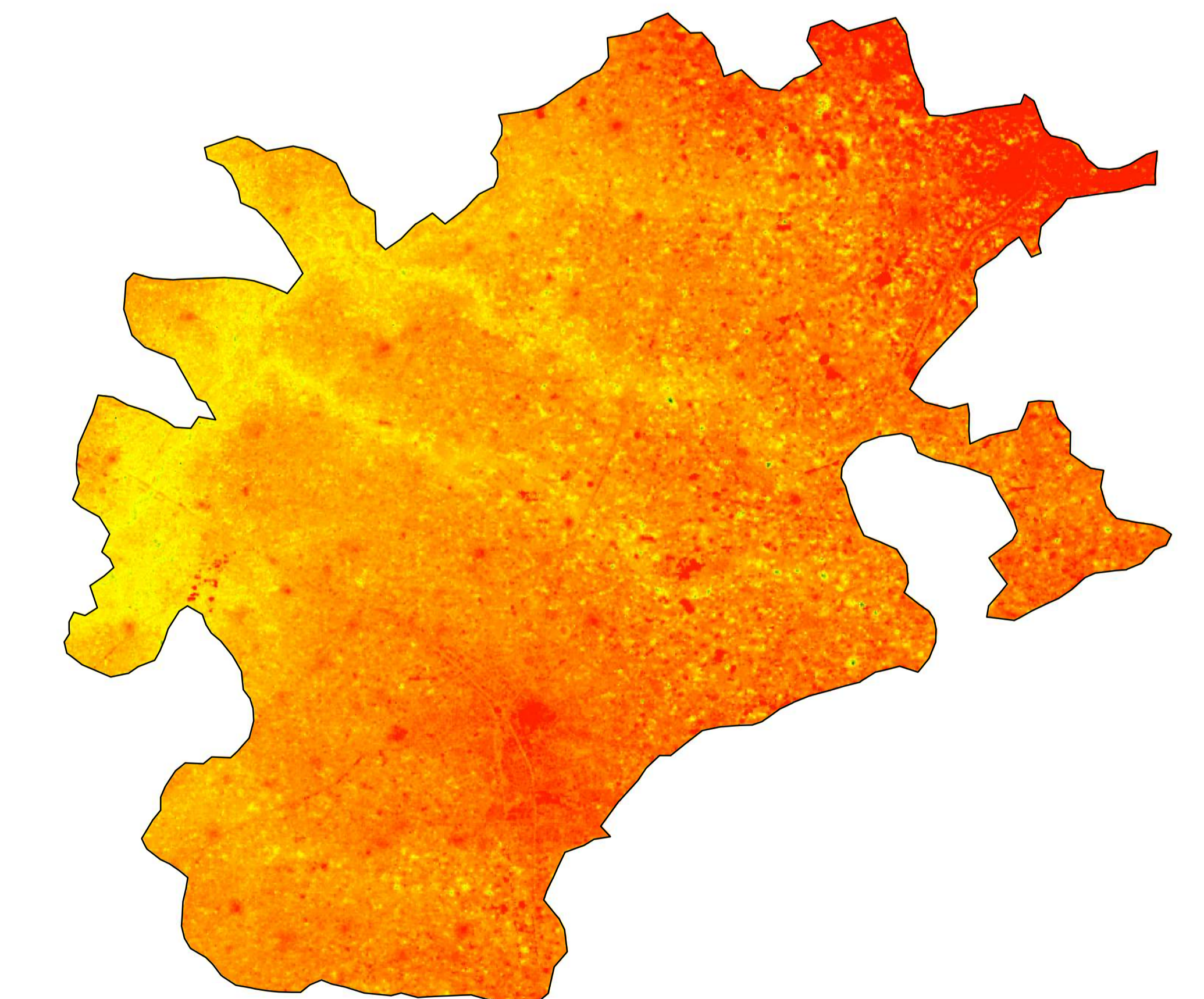
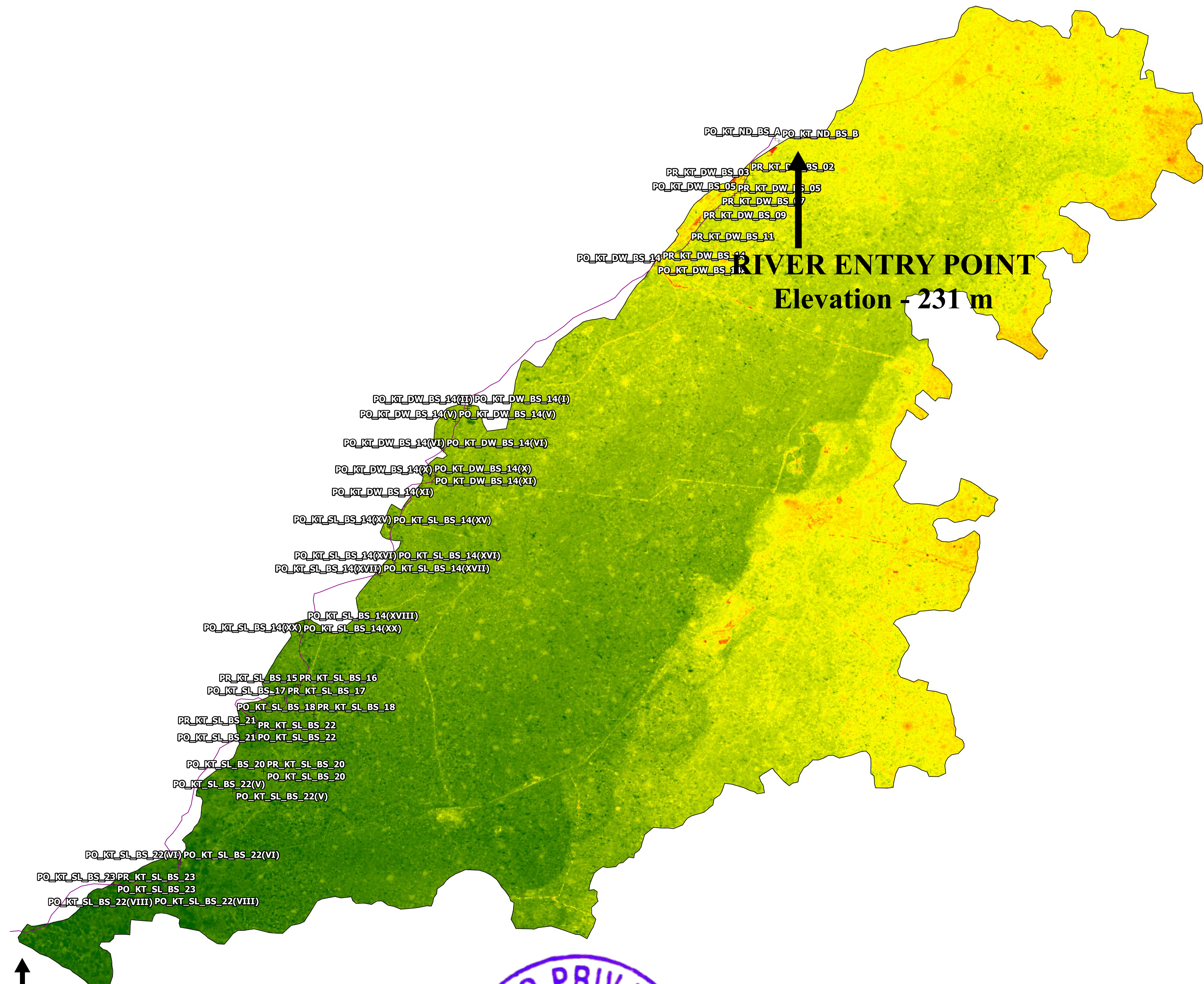
75°30'0"E

KAPURTHALA ELEVATION MAP (CARTOSAT NRSC)



31°30'0"N

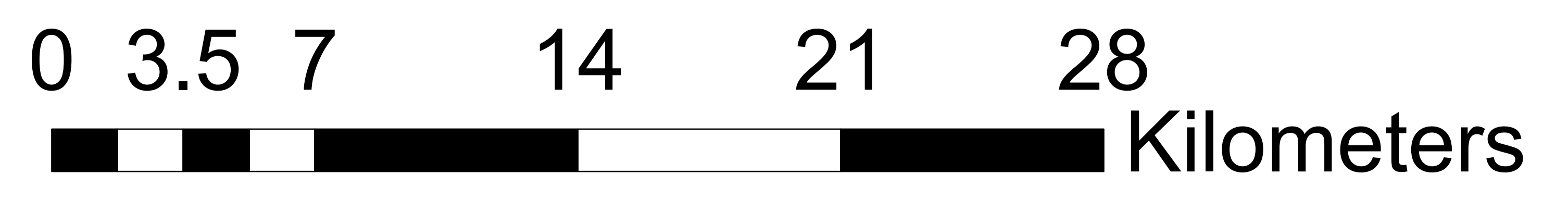
31°30'0"N



RIVER EXIT POINT
Elevation - 217m



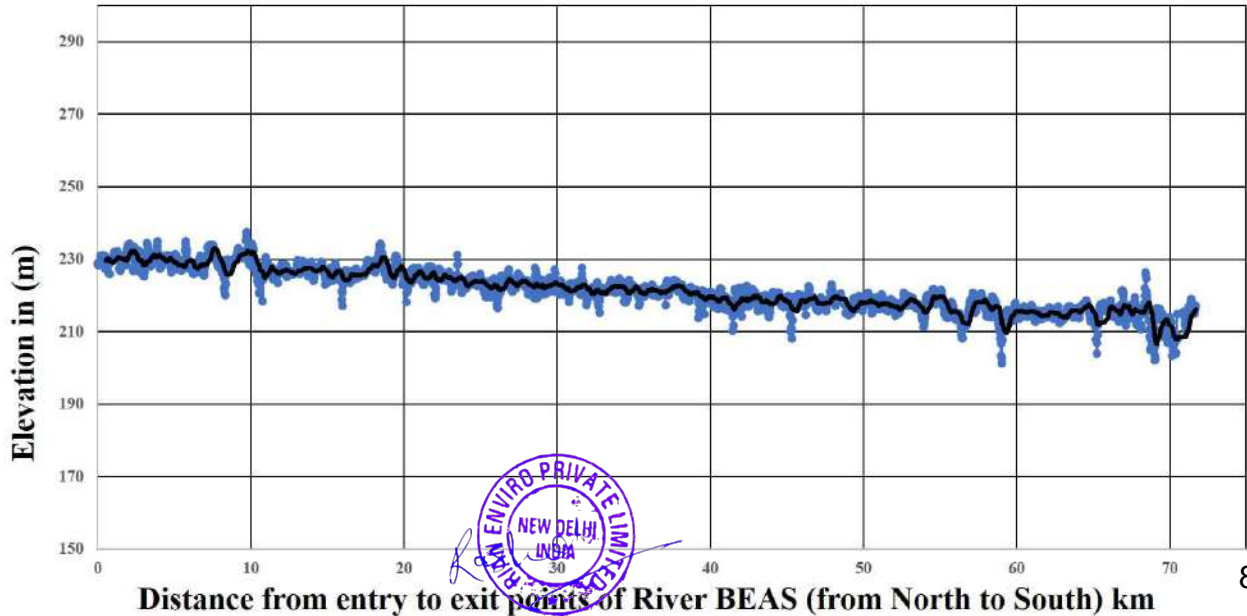
DEM SOURCE: <https://bhuvan-app3.nrsc.gov.in/data/download/index.php>
data: CARTOSAT DEM (1.2 m Spatial Resolution)



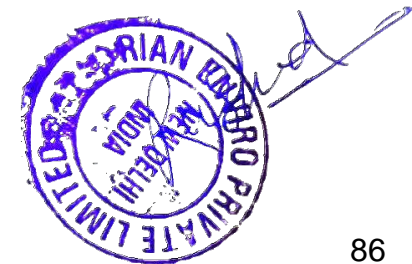
75°0'0"E

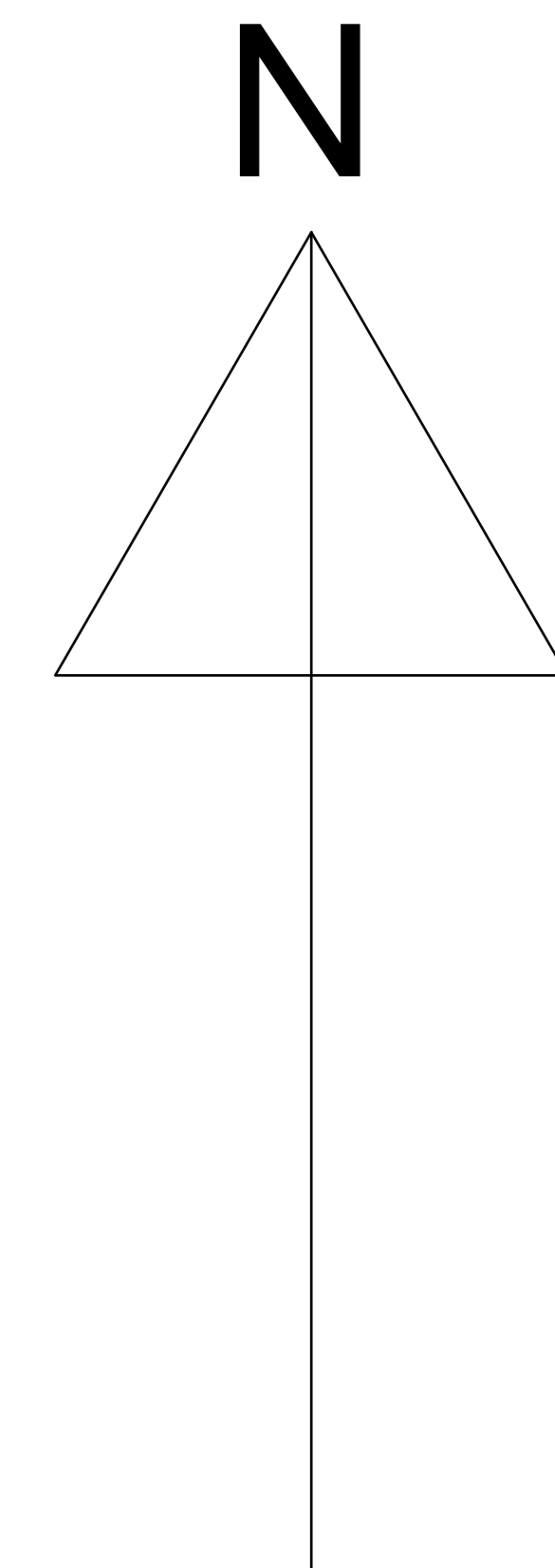
75°30'0"E

Longitudinal Section of River Beas (Kapurthala)

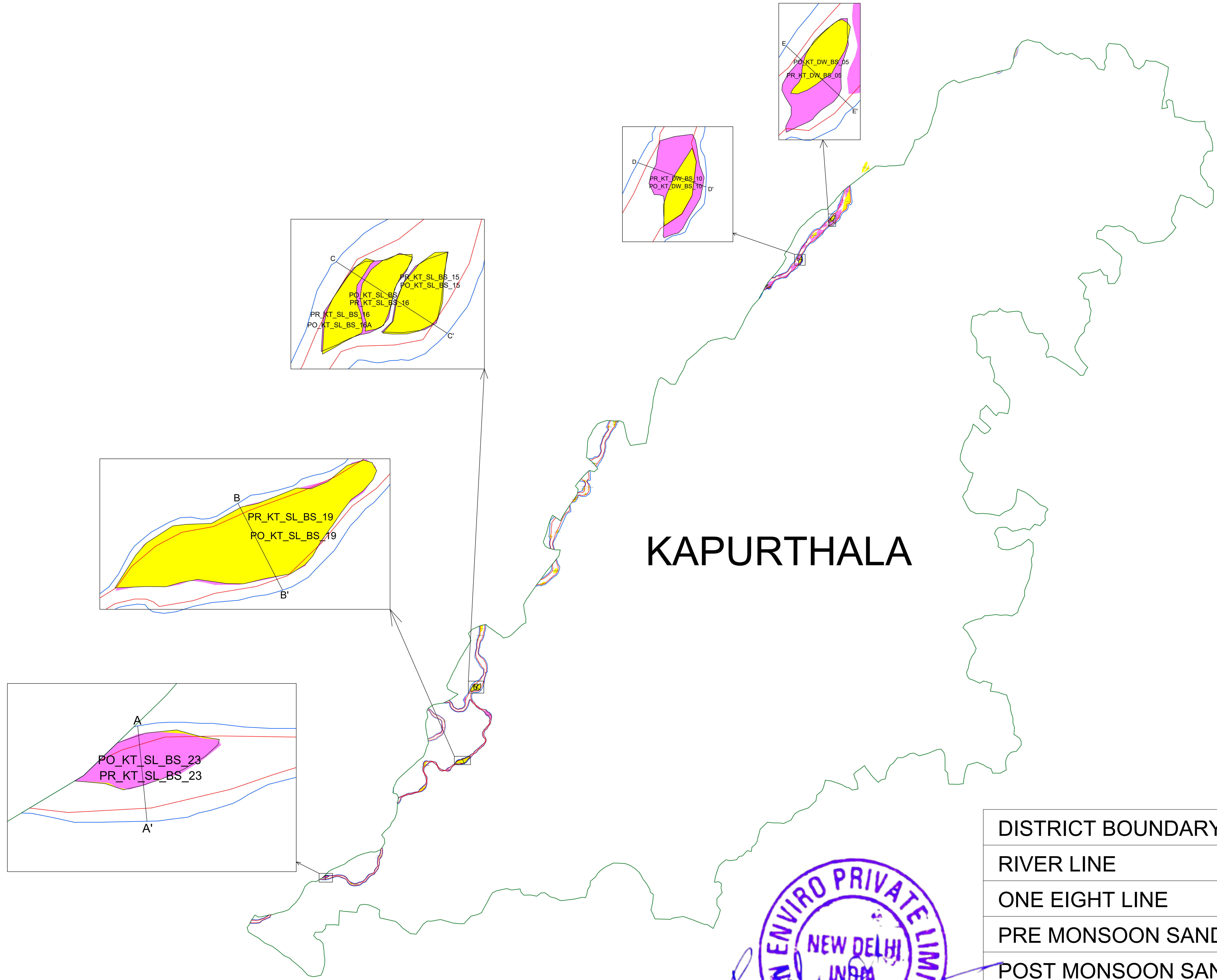


**Plate IV
Cross section line plotted along potential sandbar on Beas River, Kapurthala
District**





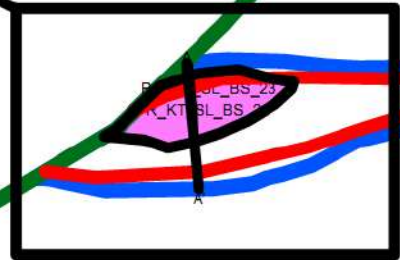
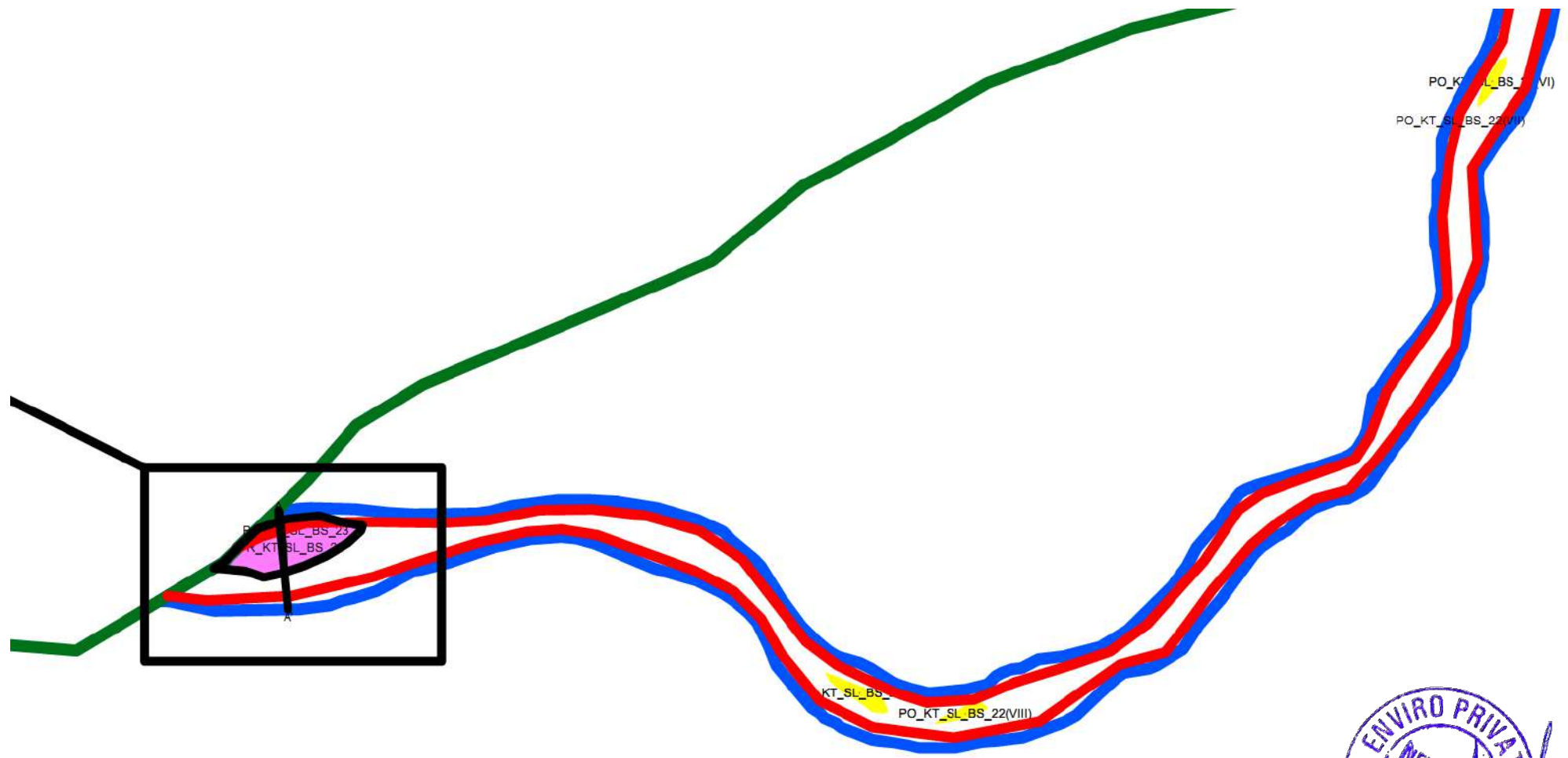
KAPURTHALA



DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

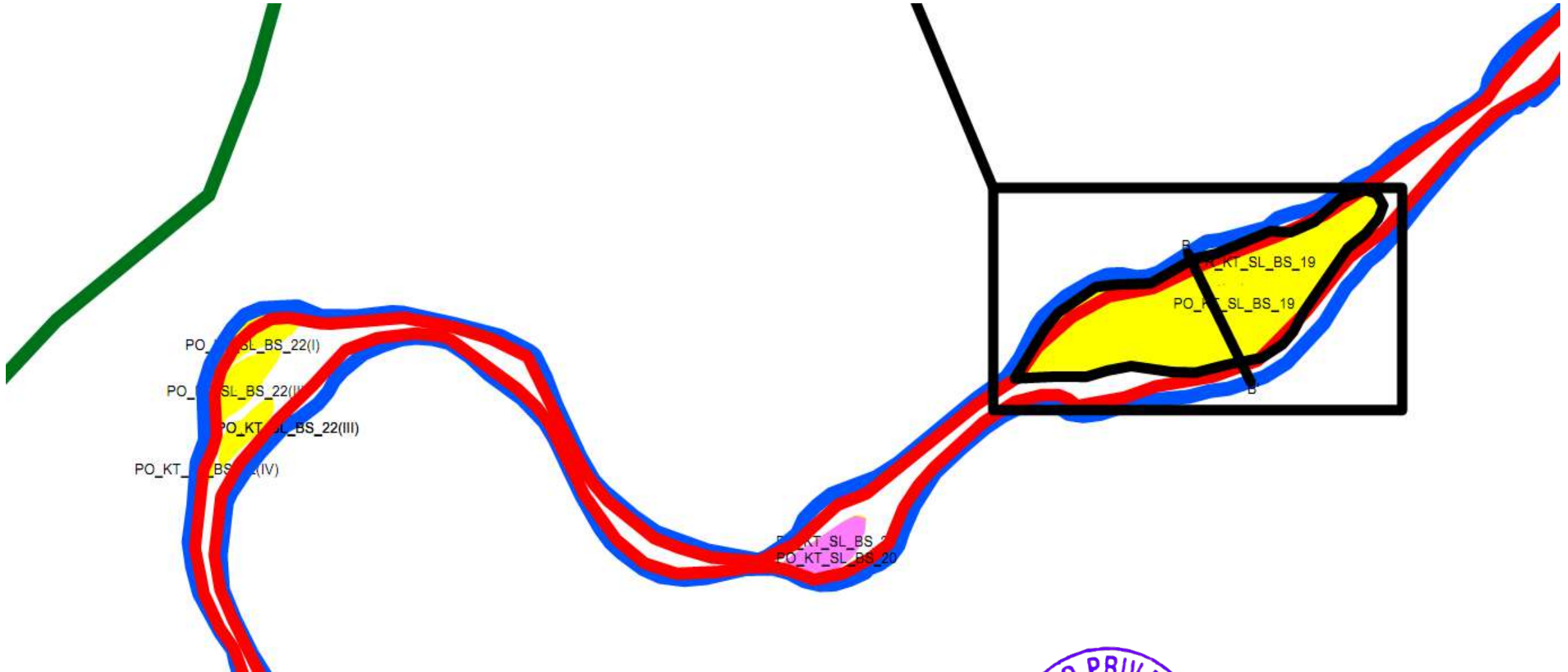


RD 44-55



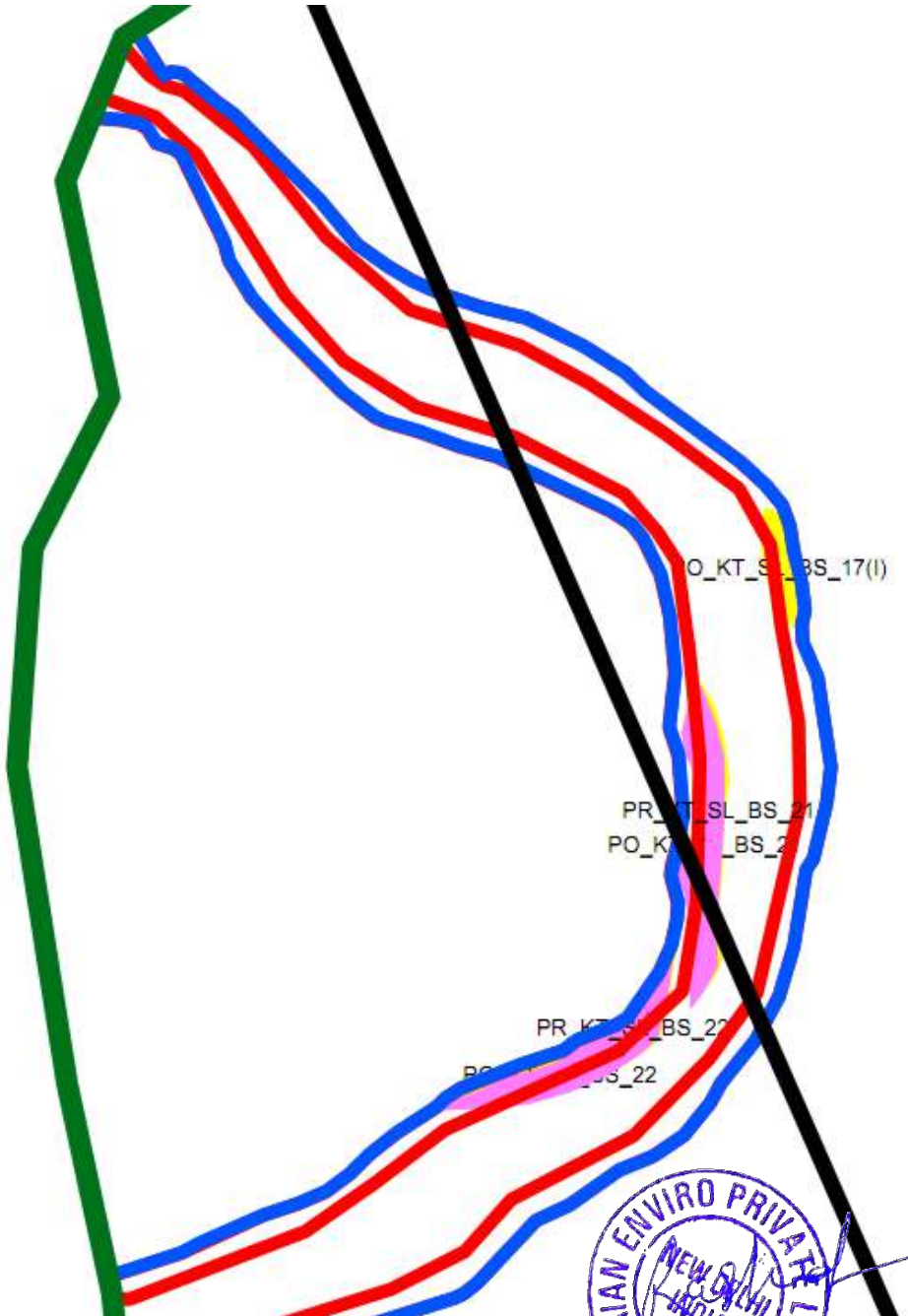
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 40.5-43.5



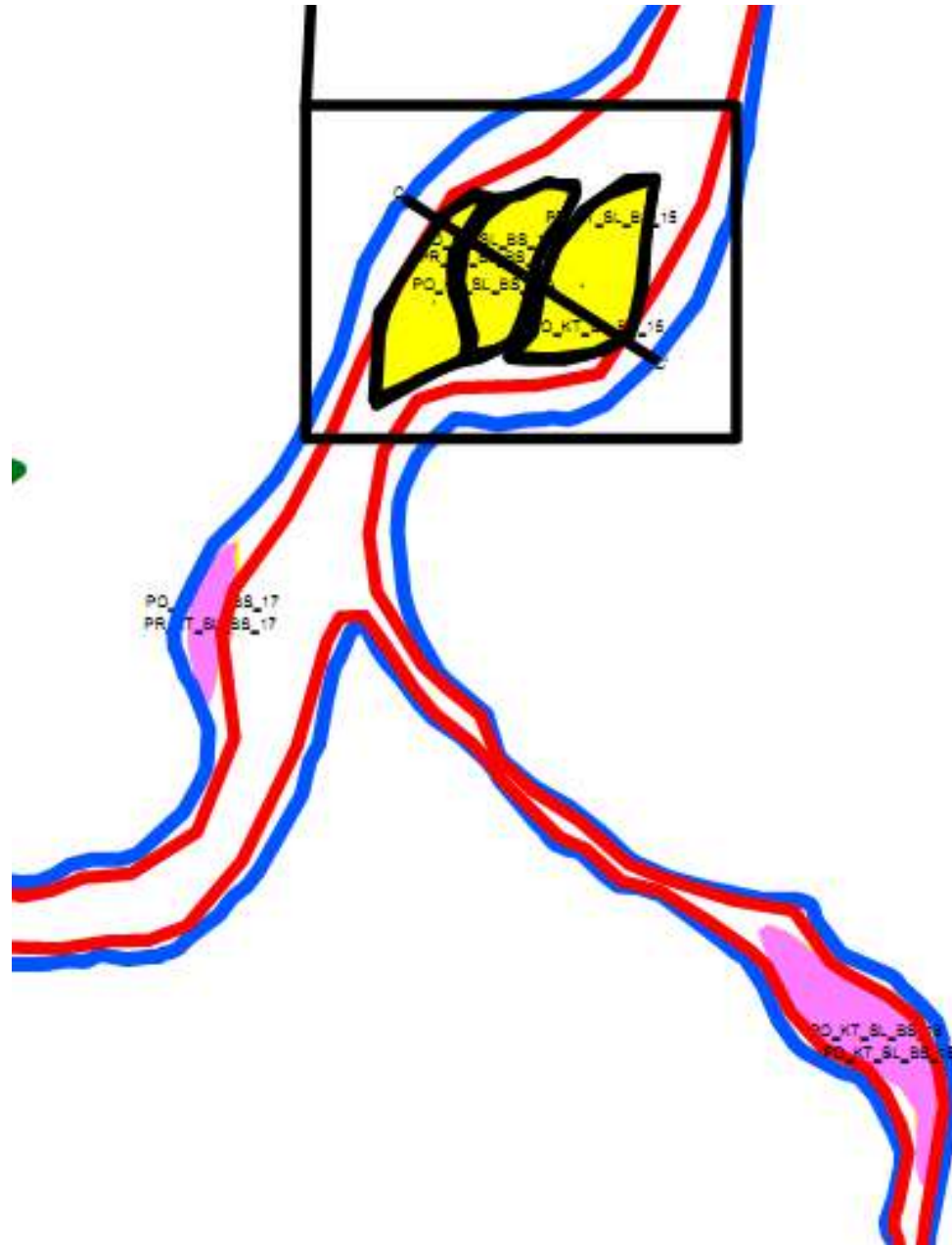
DISTRICT BOUNDARY	—
RIVER LINE	—
ONE EIGHT LINE	—
PRE MONSOON SAND BAR	—
POST MONSOON SAND BAR	—
POSTSECTION LINE	—

RD 20-23.5



DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

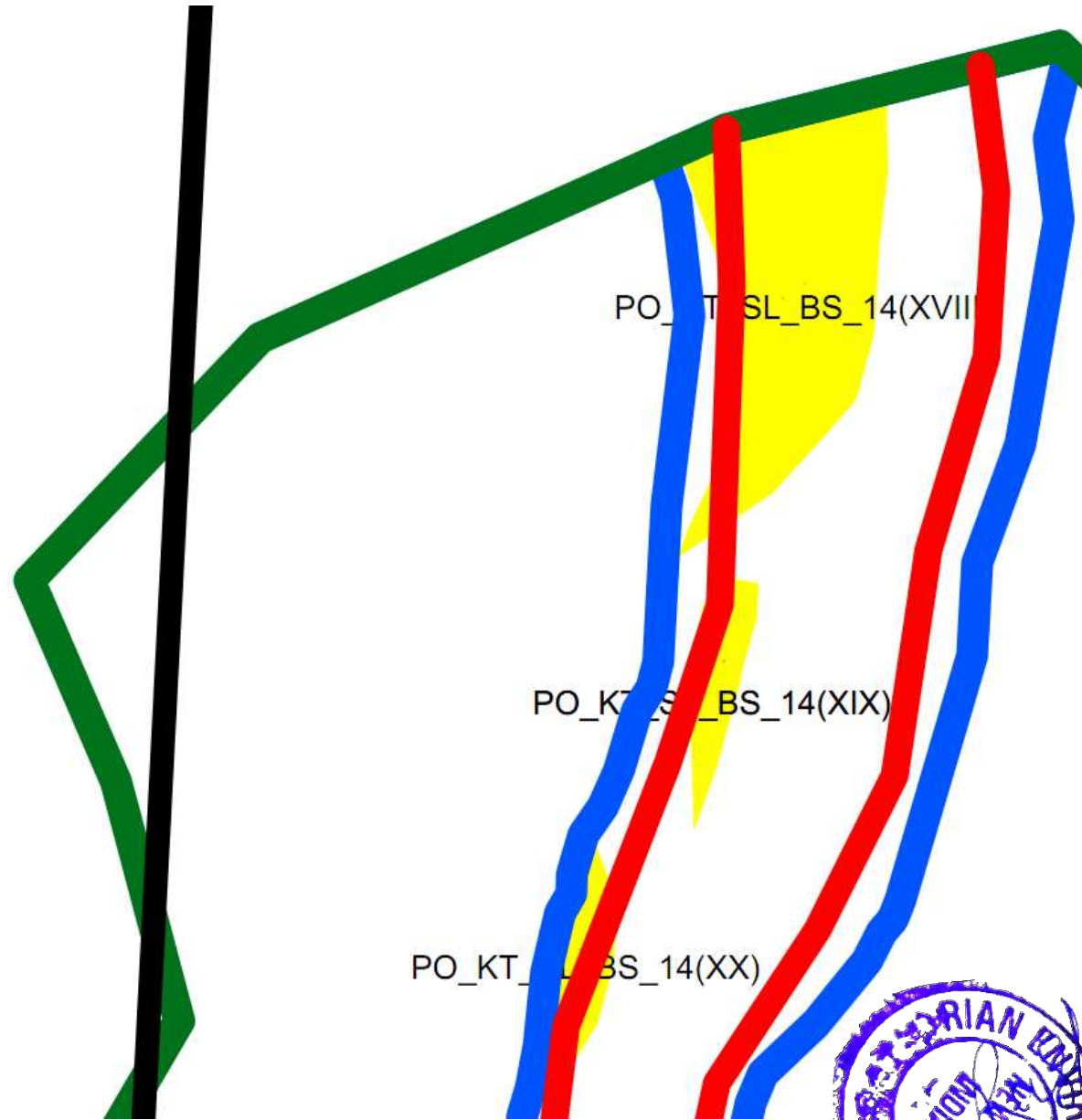
RD 39-40.5



DISTRICT BOUNDARY	—
RIVER LINE	—
ONE EIGHT LINE	—
PRE MONSOON SAND BAR	—
POST MONSOON SAND BAR	—
POSTSECTION LINE	—



RD 35-37



PO_KT_L_BS_14(XX)

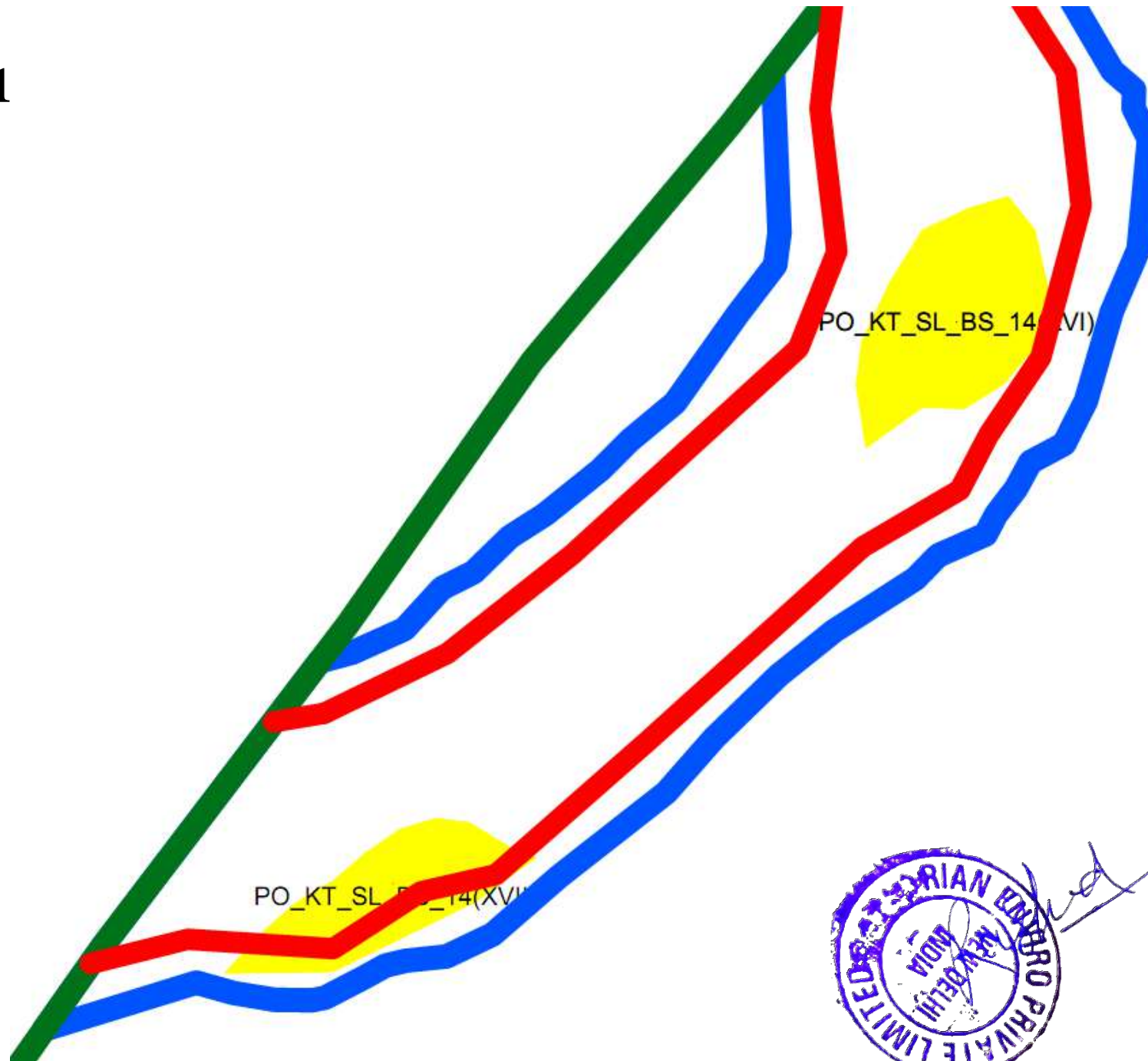
PO_KT_S_BS_14(XIX)

PO_TSL_BS_14(XVII)



DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 30-31



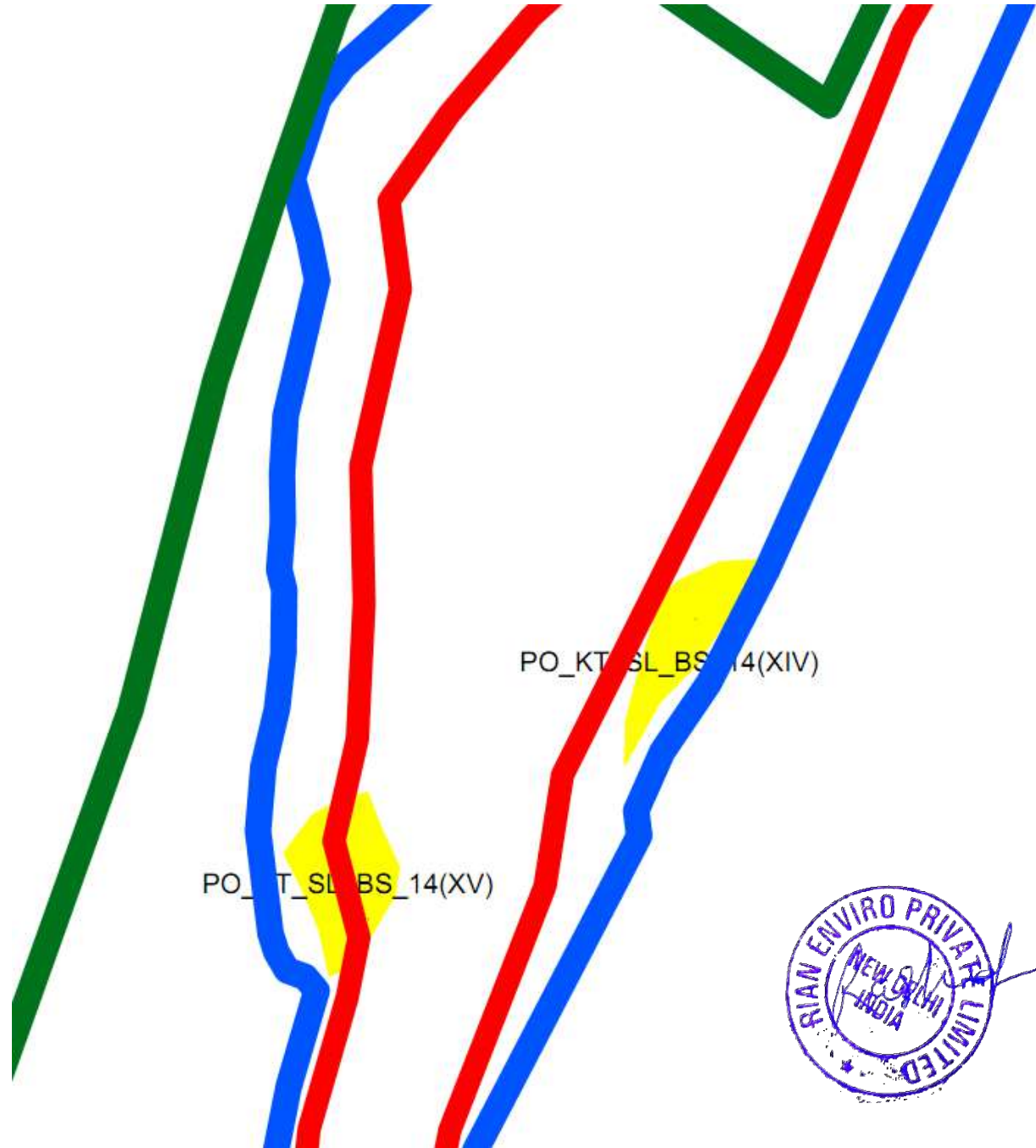
PO_KT_SL_BS_14 (VI)

PO_KT_SL_BS_14 (XVII)

DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

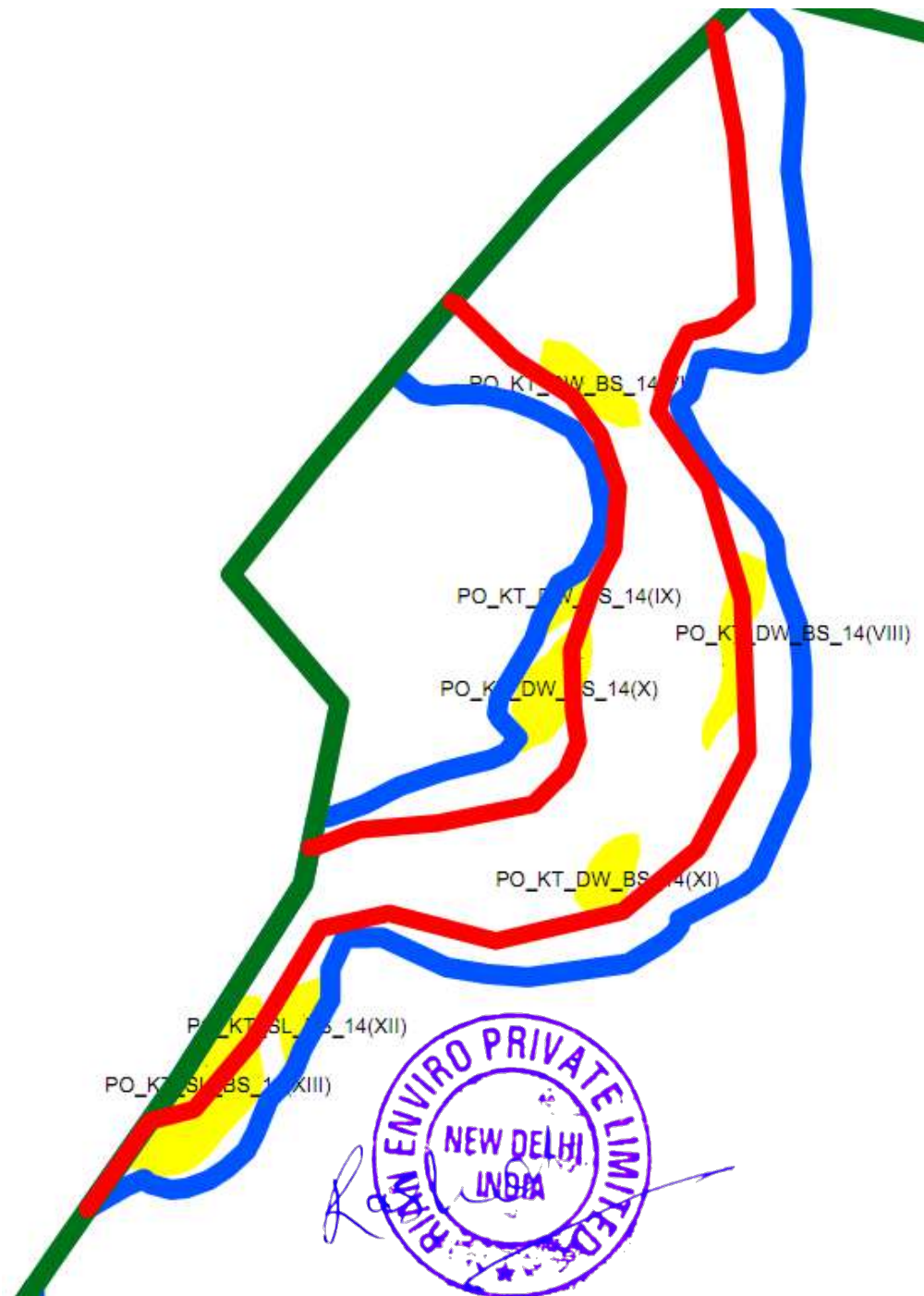


RD 29



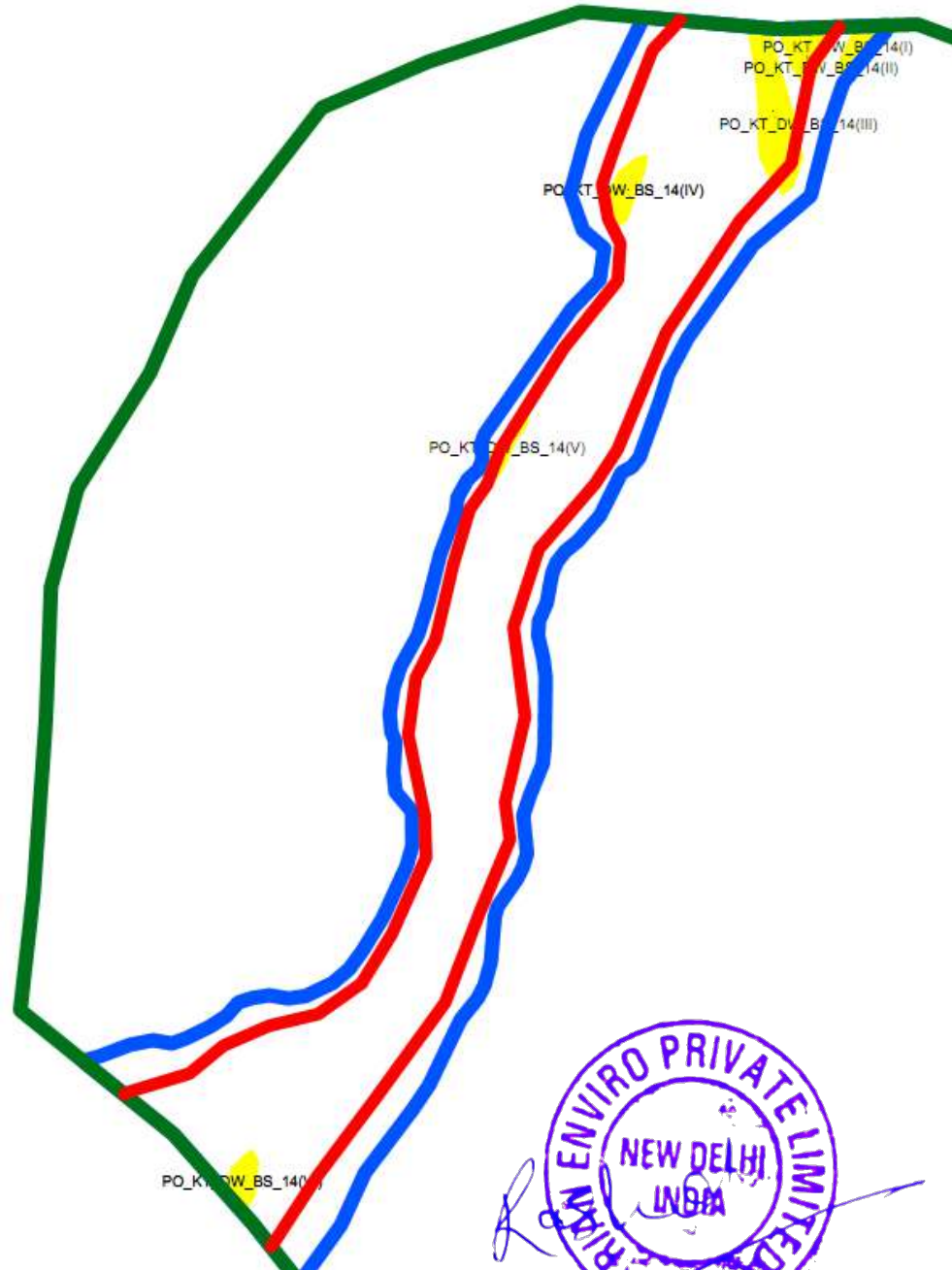
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 25-26.5



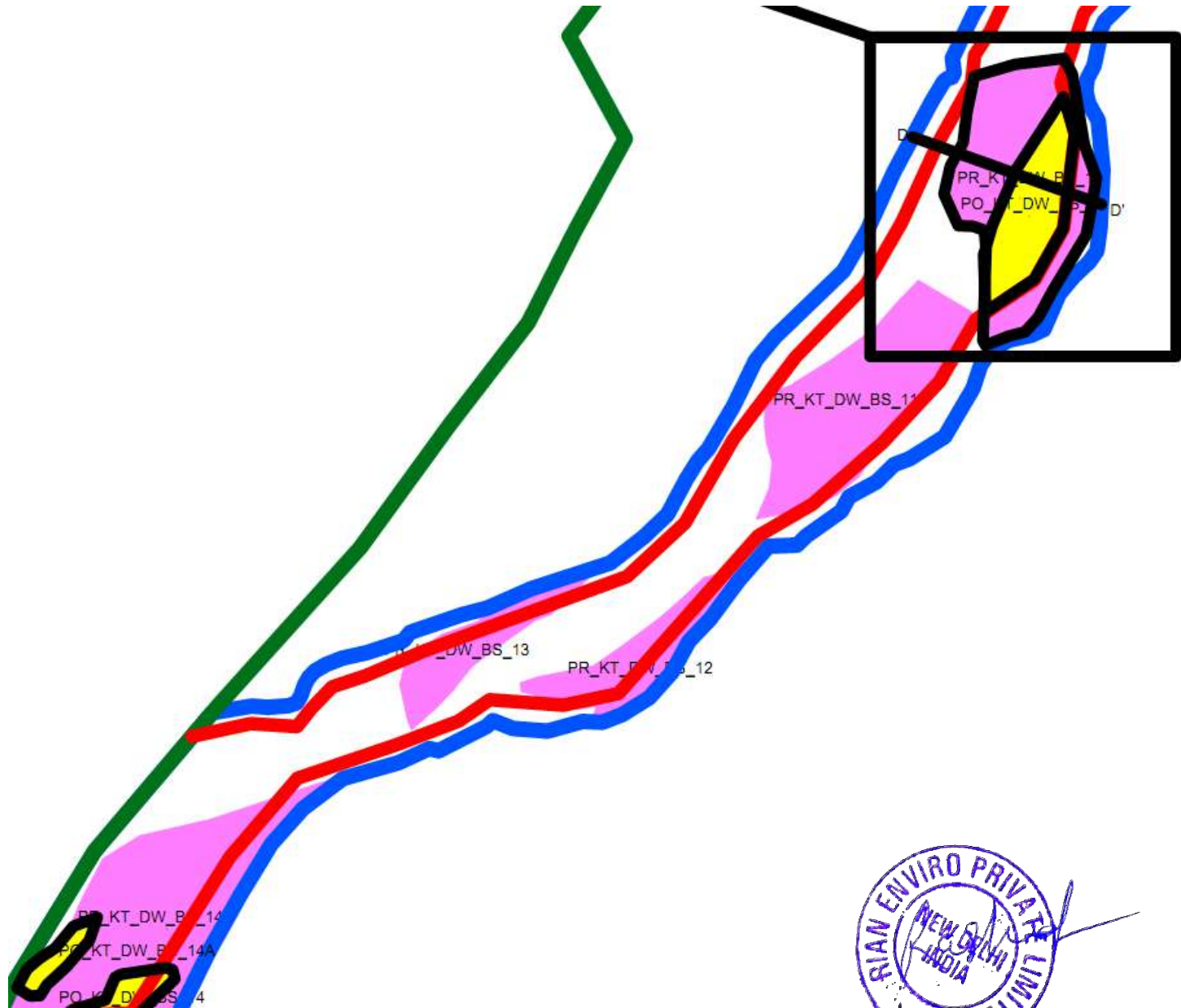
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 20-23.5



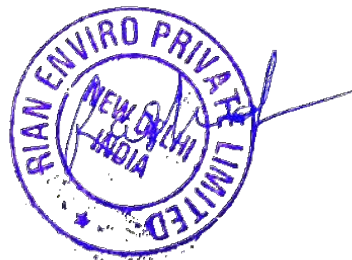
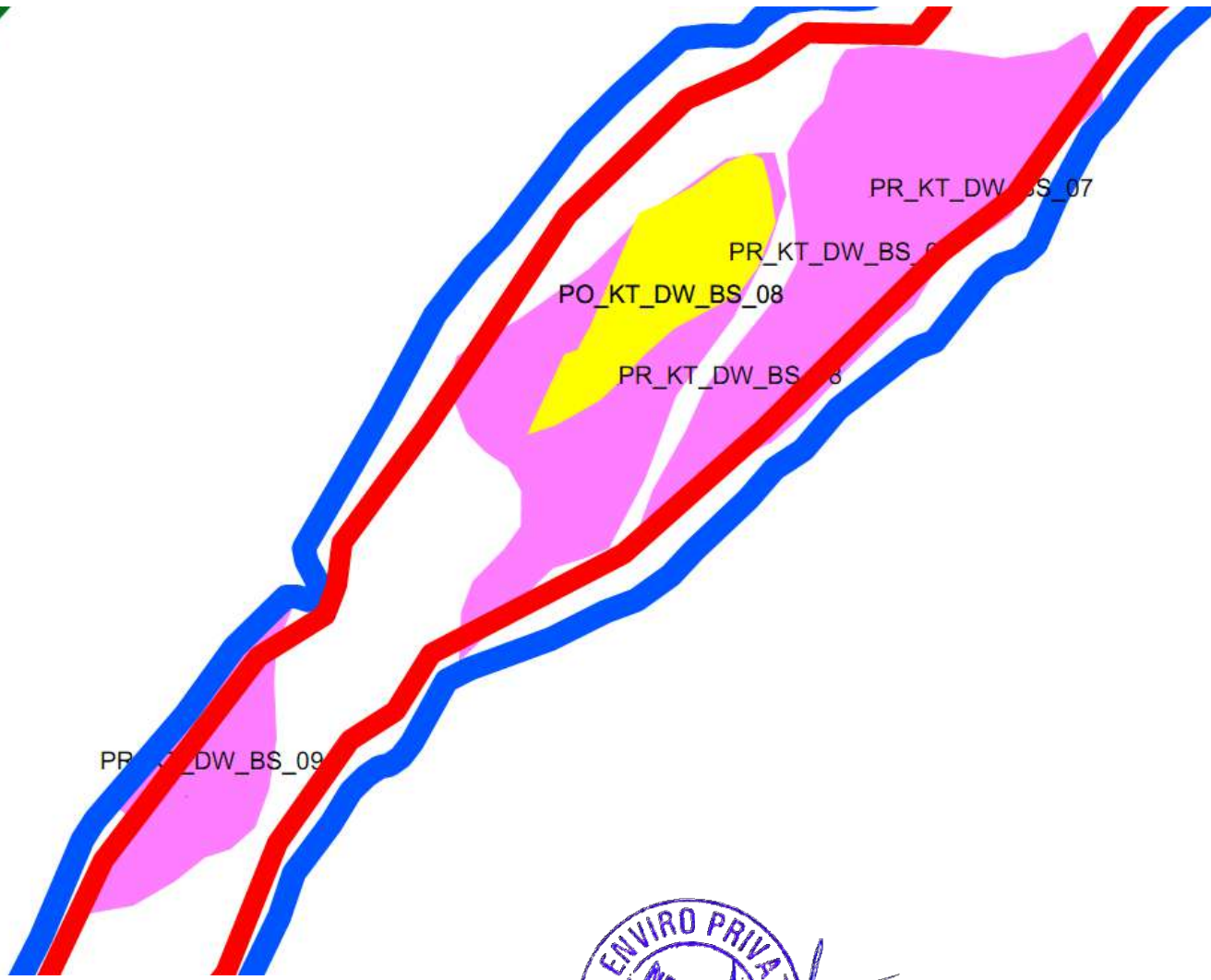
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 5-7.5



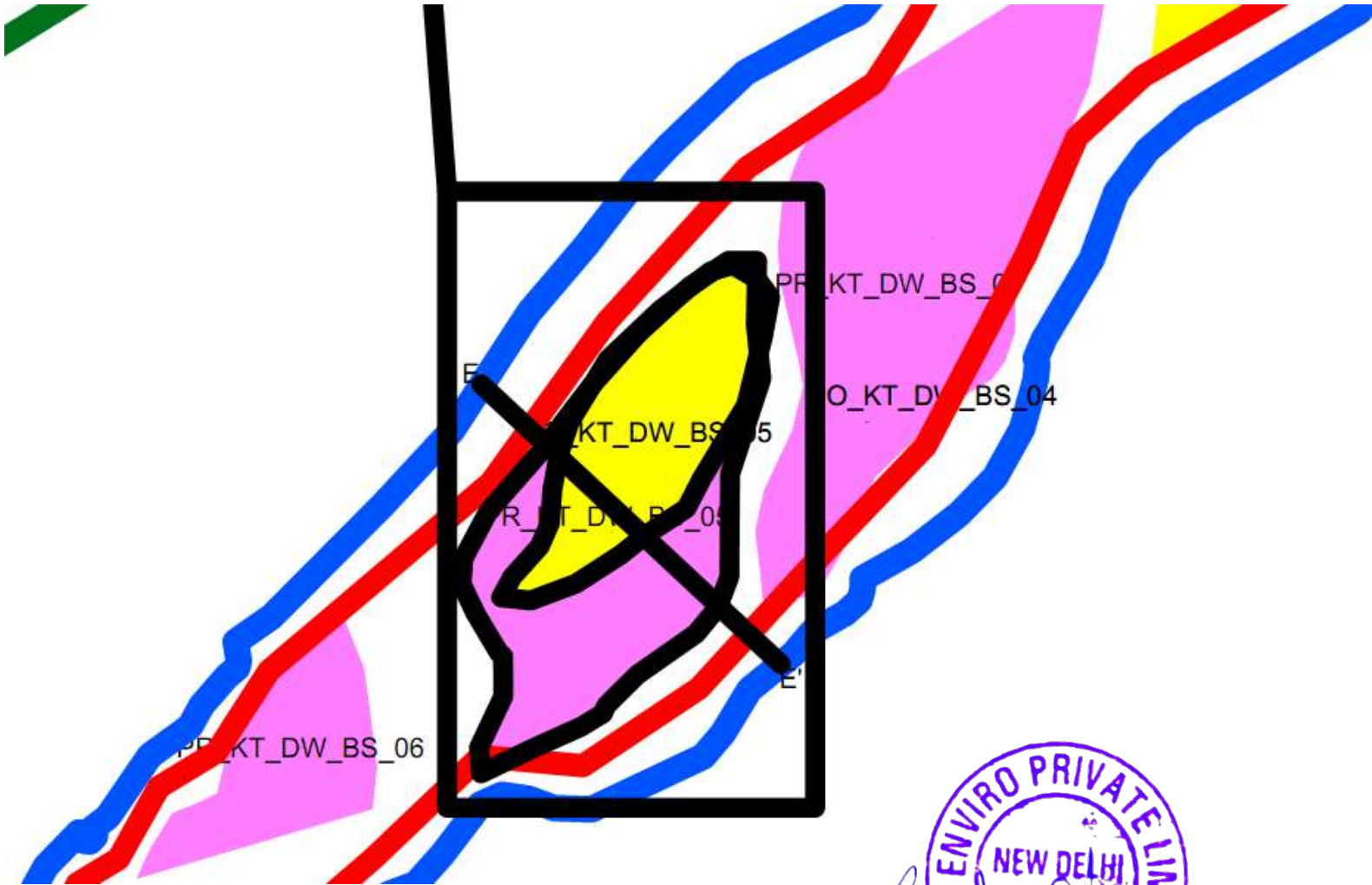
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 3.0-5.0



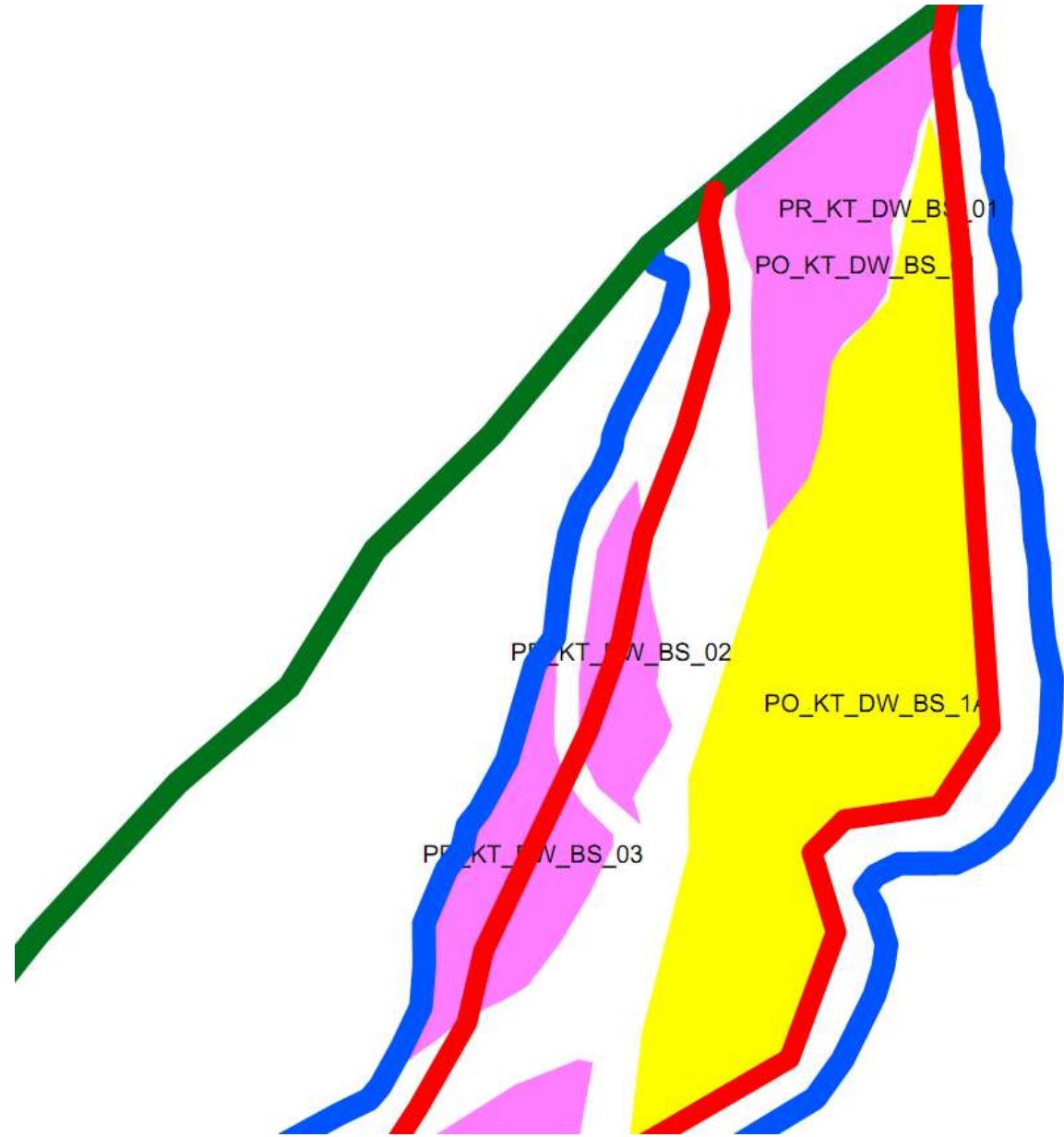
DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 2.0-3.0



DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE	

RD 1-2.0



DISTRICT BOUNDARY	
RIVER LINE	
ONE EIGHT LINE	
PRE MONSOON SAND BAR	
POST MONSOON SAND BAR	
POSTSECTION LINE 100	



Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

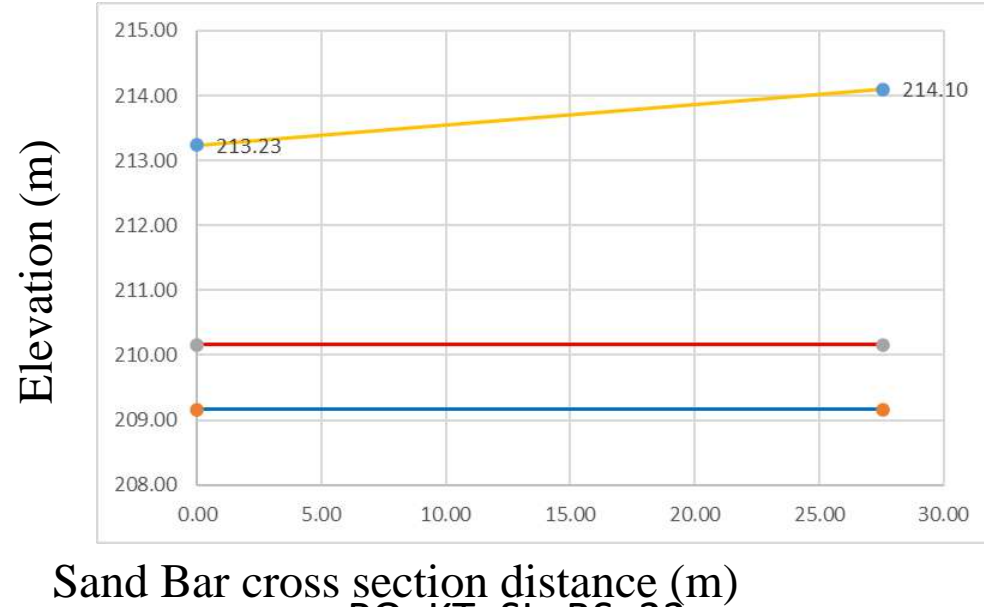
Calculation

- Potential Area(Ha.): 0.59 Ha
- Average Thickness:3 m
- Bulk Density: 1.57
- 0.59*3*1.57*10000=27789 Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)= 16673.4 Tonnes



- Red Line
- Pre monsoon Elevation
- Post monsoon Elevation
- Thalweg line

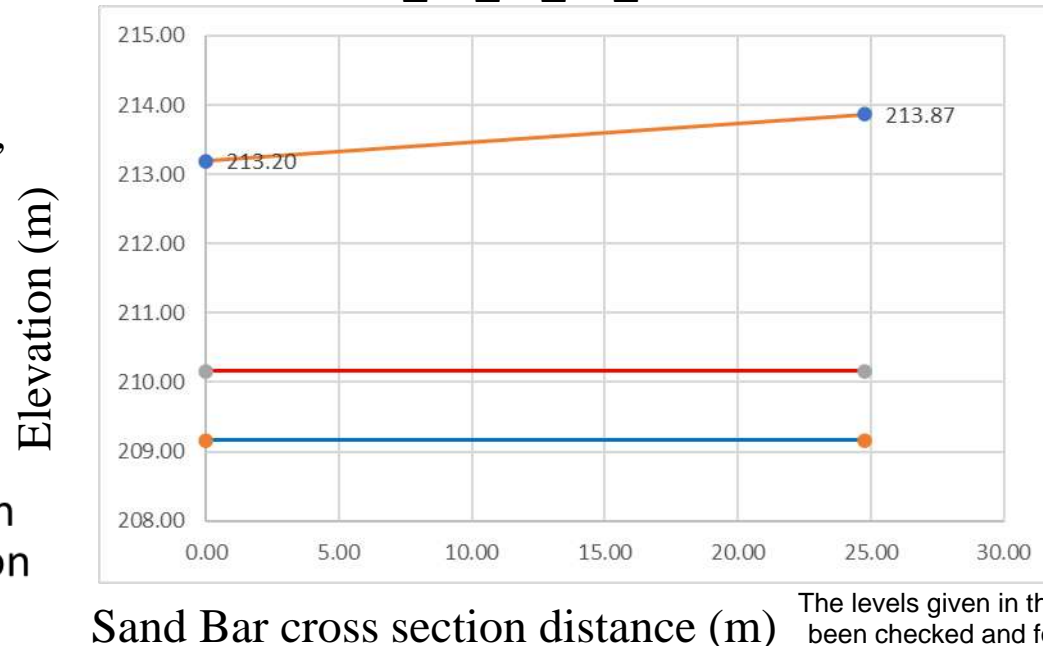
Cross Section Sand Bar
 PR_KT_SL_BS_22



Pre-Thickness
3.07
3.94
3.51

Pre Monsoon
Average Thickness:3.51

Sand Bar cross section distance (m)
 PO_KT_SL_BS_22



Post Thickness
3.04
3.71
3.37

Post Monsoon
Average Thickness: 3.25

The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

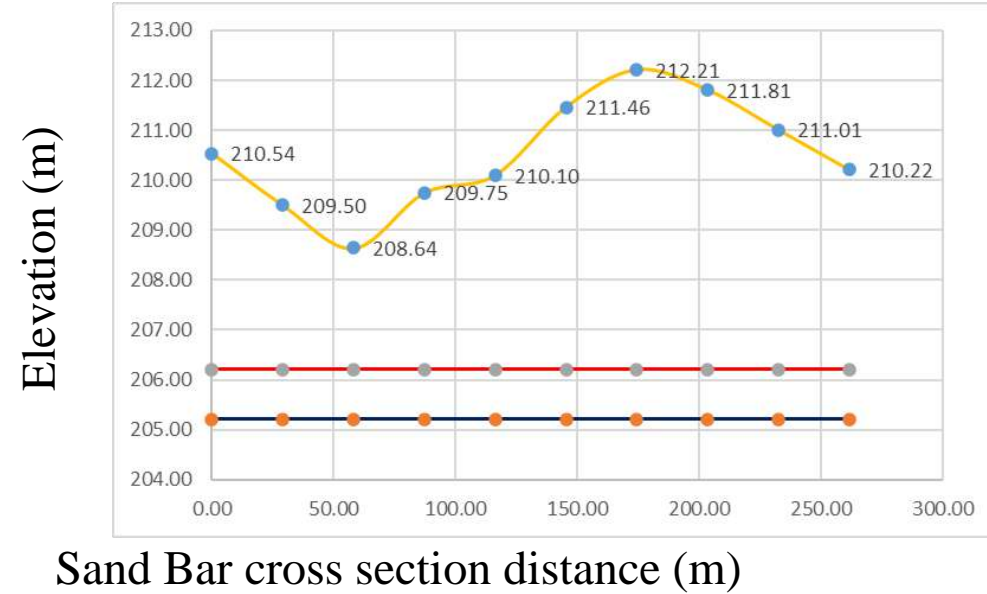
Calculation

- Potential Area(Ha.):16.06
- Average Thickness:3
- Bulk Density:1.57
- 16.06*3*1.57*10000=756426 Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)= 453855.6 Tonnes

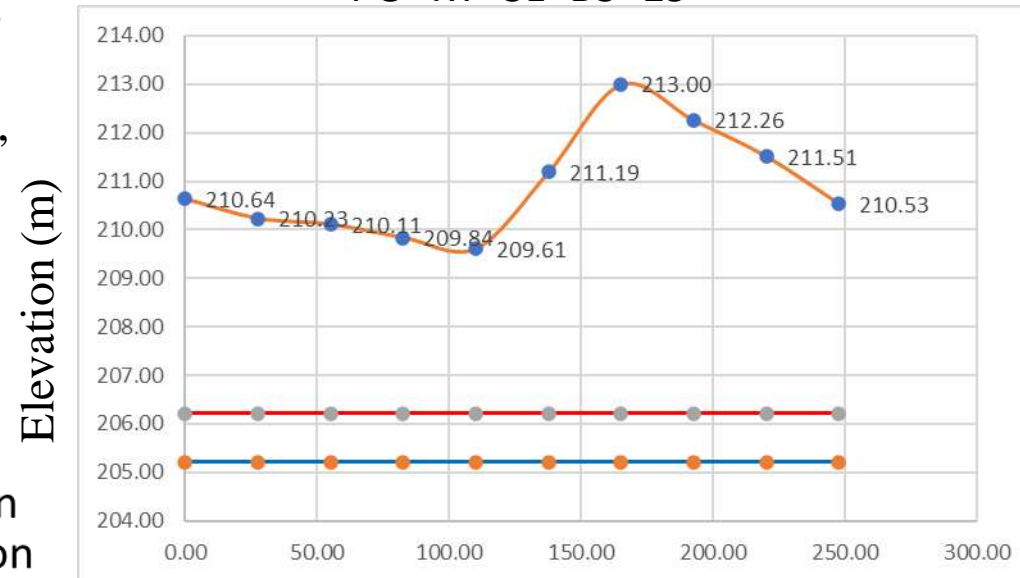


- Red Line
- Pre monsoon Elevation
- Post monsoon Elevation
- Thalweg line

**Cross Section Sand Bar
 PR_KT_SL_BS_19**



**Sand Bar cross section distance (m)
 PO KT SL BS 19**



Sand Bar cross section distance (m)

Pre Monsoon
**Average Thickness:
 4.31**

Post Monsoon
Average Thickness: 4.68

Pre Thickness
4.33
3.29
2.43
3.54
3.89
5.25
6.00
5.60
4.80
4.01
4.31

Post Thickness
4.43
4.02
3.90
3.63
3.40
4.98
6.79
6.05
5.30
4.32
4.68

The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

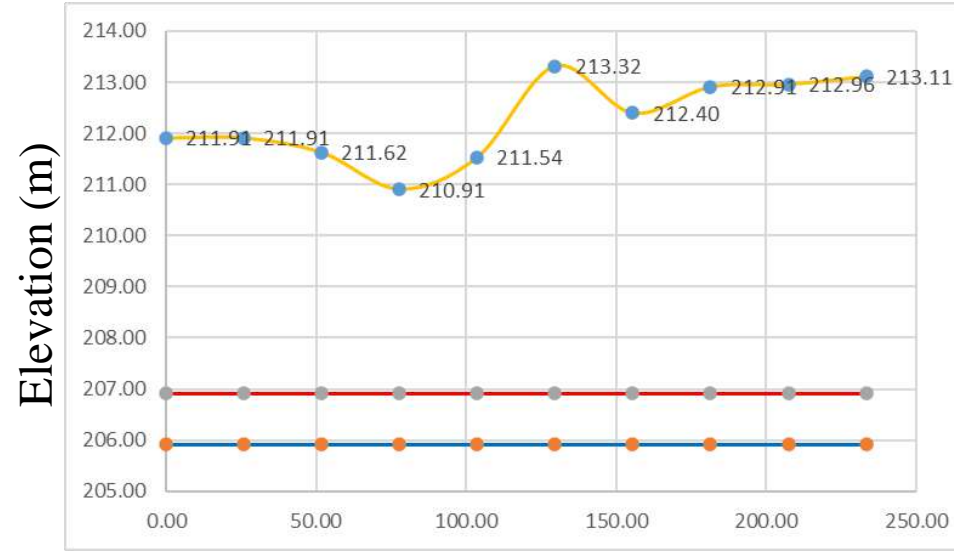
Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Calculation

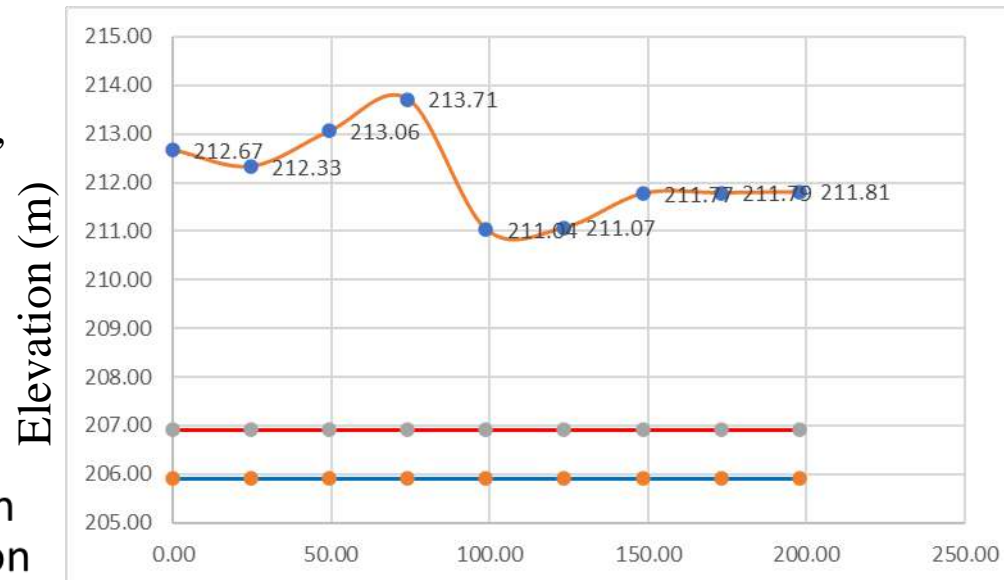
- Potential Area(Ha.):7.19 Ha
- Average Thickness: 3
- Bulk Density:1.57
- 7.19*3*1.57*10000=338649 Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=203189.4

- Red Line
- Pre monsoon Elevation
- Post monsoon Elevation
- Thalweg line

**Cross Section Sand Bar
 PR_KT_SL_BS_18**



**Sand Bar cross section distance (m)
 PO_KT_SL_BS_18**



Sand Bar cross section distance (m)

Pre Thickness
5.00
5.00
4.71
4.00
4.63
6.41
5.49
6.00
6.05
6.20
5.35

Pre Monsoon
Average Thickness: 5.35

Post Thickness
5.76
5.42
6.15
6.80
4.13
4.16
4.86
4.88
4.90
5.23

Post Monsoon
Average Thickness: 5.23



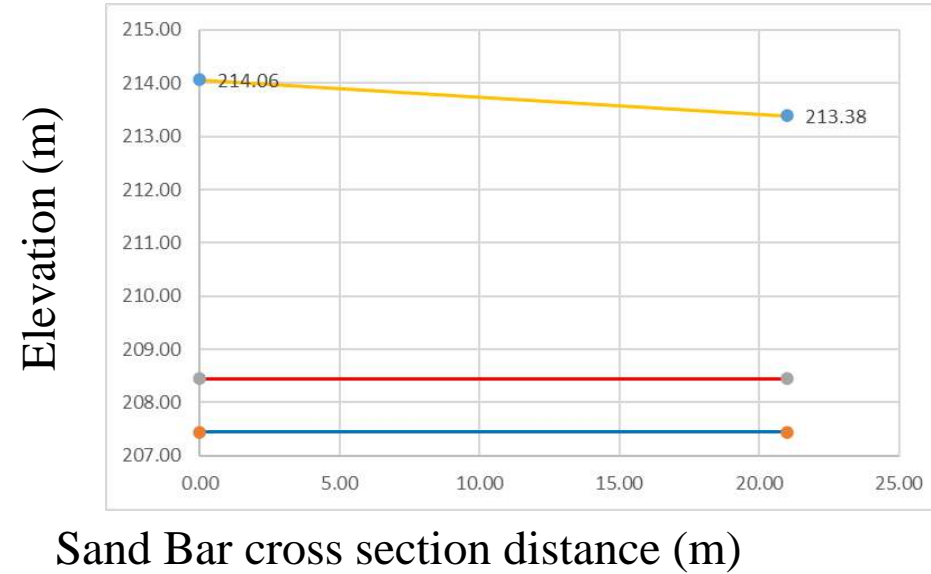
The levels given in the cross section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Calculation

- Potential Area(Ha.): 0.25 Ha
- Average Thickness:3
- Bulk Density:1.57
- 0.25*3*1.57*10000=11775 Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)= 7065 Tonnes

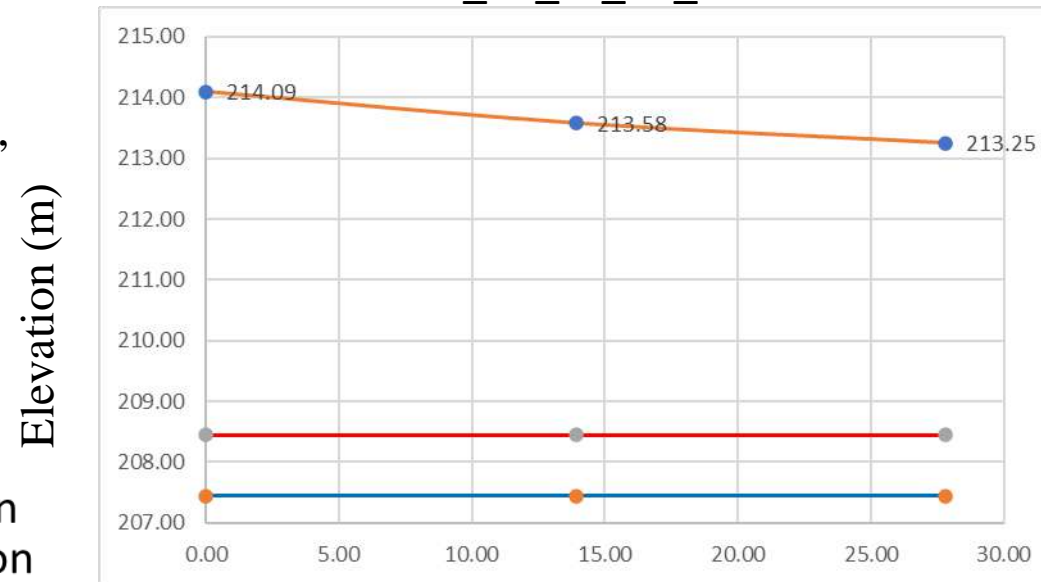
**Cross Section Sand Bar
 PR_KT_SL_BS_17**



Pre Thickness
5.62
4.94
5.28

Pre Monsoon
Average Thickness: 5.28

**Sand Bar cross section distance (m)
 PO_KT_SL_BS_17**



Post Thickness
5.65
5.14
4.81
5.20

Post Monsoon
Average Thickness: 5.2



- Red Line
- Pre monsoon Elevation
- Post monsoon Elevation
- Thalweg line

Sand Bar cross section distance (m)

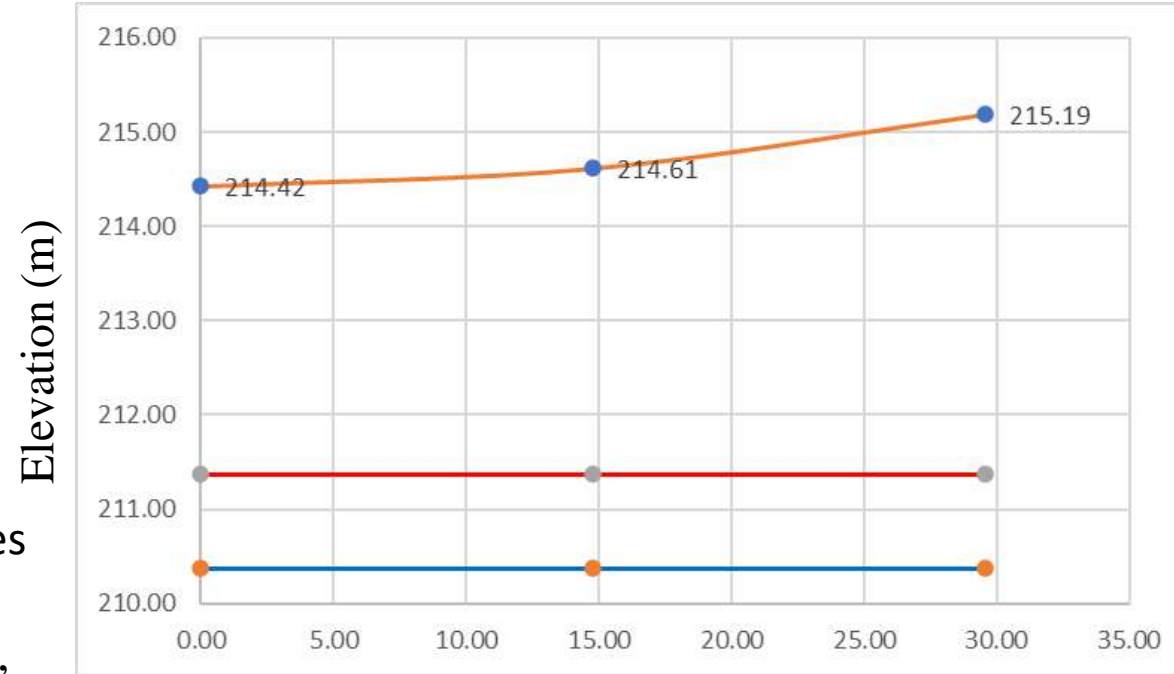
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Cross Section Sand Bar
 PO_KT_SL_BS_14(XX)

Calculation

- Potential Area(Ha.):0.36 Ha
- Average Thickness: 3m
- Bulk Density:1.57
- $0.36 * 3 * 1.57 * 10000 = 16956$ Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=10173.6 Tonnes



Post Thickness
3.05
3.24
3.82
3.37

Sand Bar cross section distance (m)

Post Monsoon

Average Thickness: 3.37

- Post monsoon Elevation
- Thalweg line
- Red Line



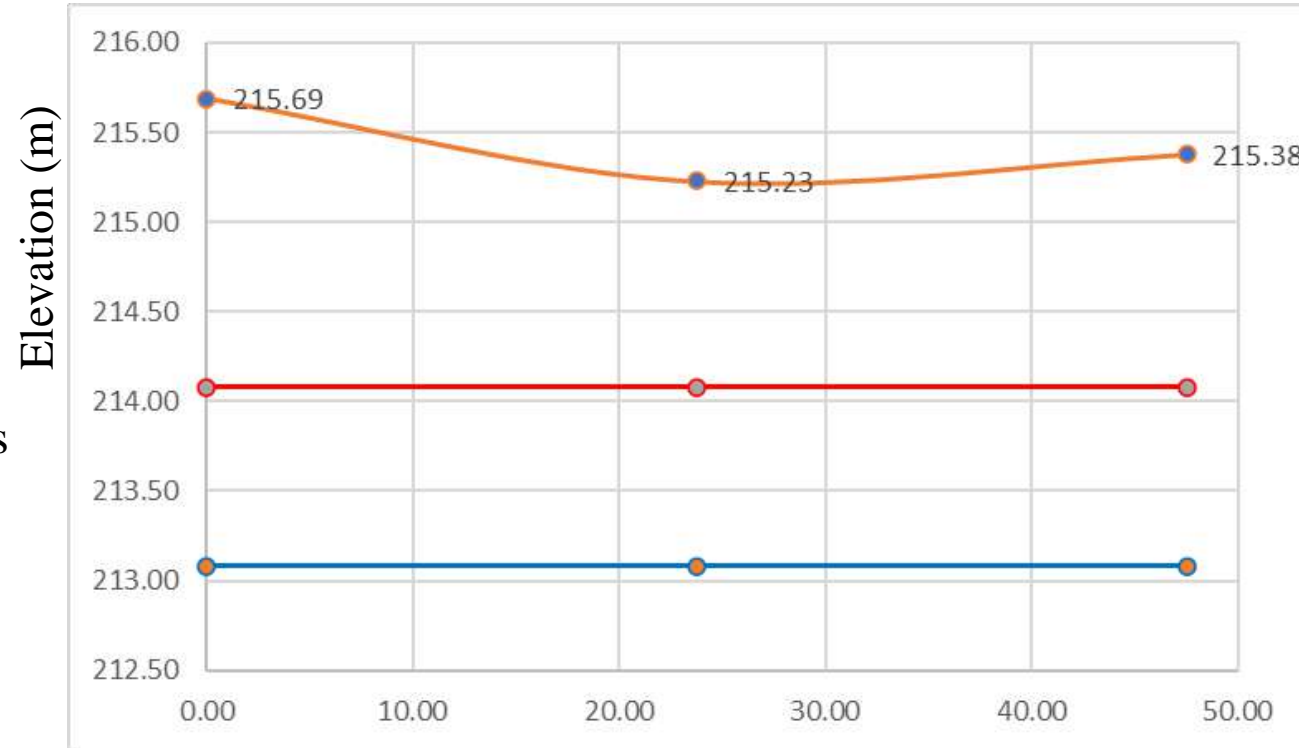
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Cross Section Sand Bar
 PO_KT_SL_BS_14(XIX)

Calculation

- Potential Area(Ha.):0.88
 - Average Thickness: 1.35
 - Bulk Density:1.57
- $0.88 * 1.35 * 1.57 * 10000 = 18651.6$ Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=11190.96



Post Thickness
1.61
1.15
1.30
1.35

Sand Bar cross section distance (m)

Post Monsoon

Average Thickness: 1.35

- Post monsoon Elevation
- Thalweg line
- Red Line



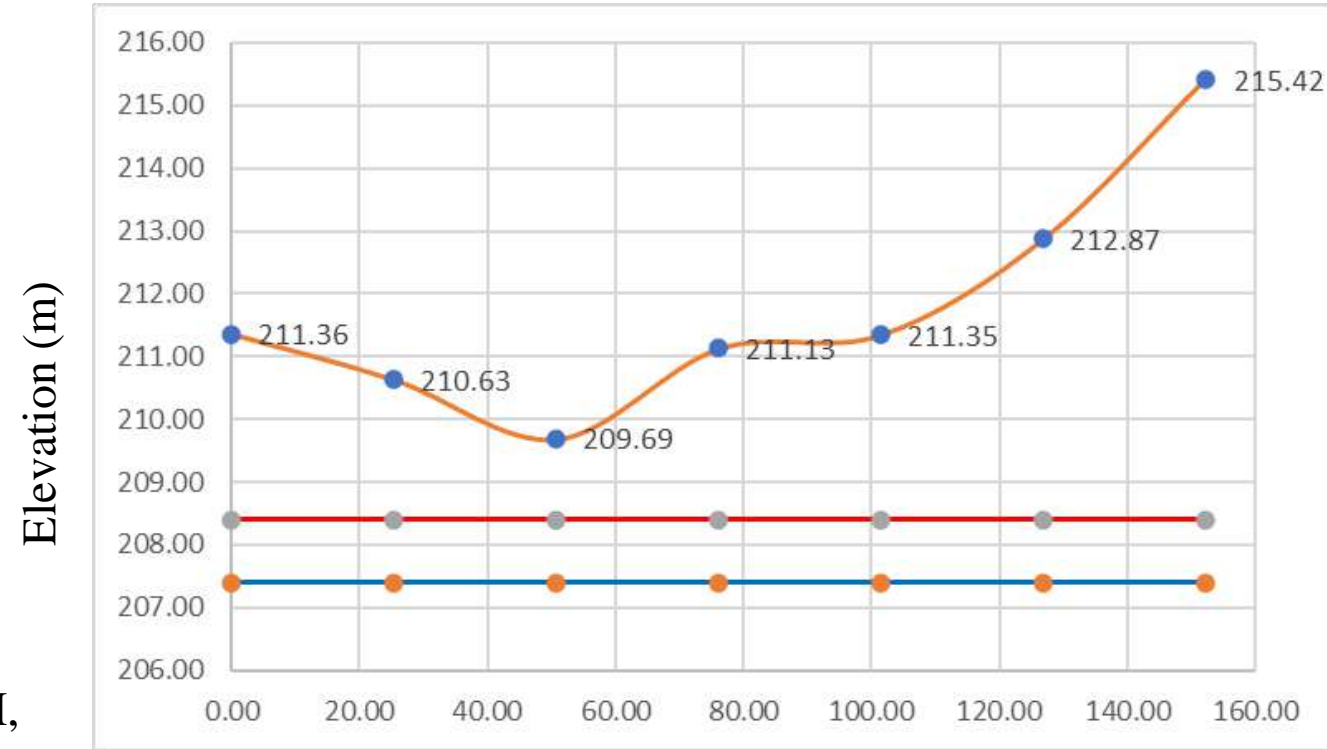
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Cross Section Sand Bar PO_KT_SL_BS_14(XVIII)

Calculation

- Potential Area(Ha.):5.73
- Average Thickness:3
- Bulk Density:1.57
- 5.73*3*1.57*10000=269883 Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=161929.8 Tonnes



Post Thickness
2.96
2.23
1.29
2.73
2.95
4.47
7.02
3.38

Sand Bar cross section distance (m)

Post Monsoon

Average Thickness:3.38

- Post monsoon Elevation
- Thalweg line
- Red Line

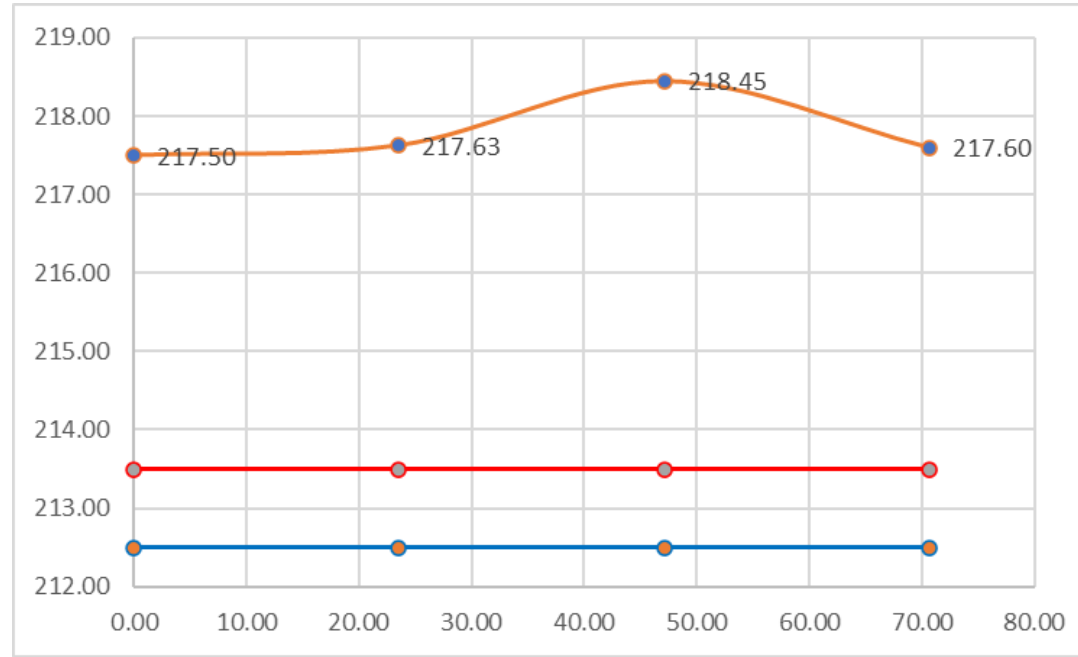


The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Cross Section Sand Bar PO_KT_SL_BS_14(XIII)

Elevation (m)



Sand Bar cross section distance (m)

Post Thickness
4.00
4.13
4.95
4.10
4.30

Calculation

- Potential Area(Ha.):1.37 Ha
- Average Thickness:3
- Bulk Density:1.57
- 1.37*3*1.57*10000=64527
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=38716.2

Post Monsoon

Average Thickness:4.3

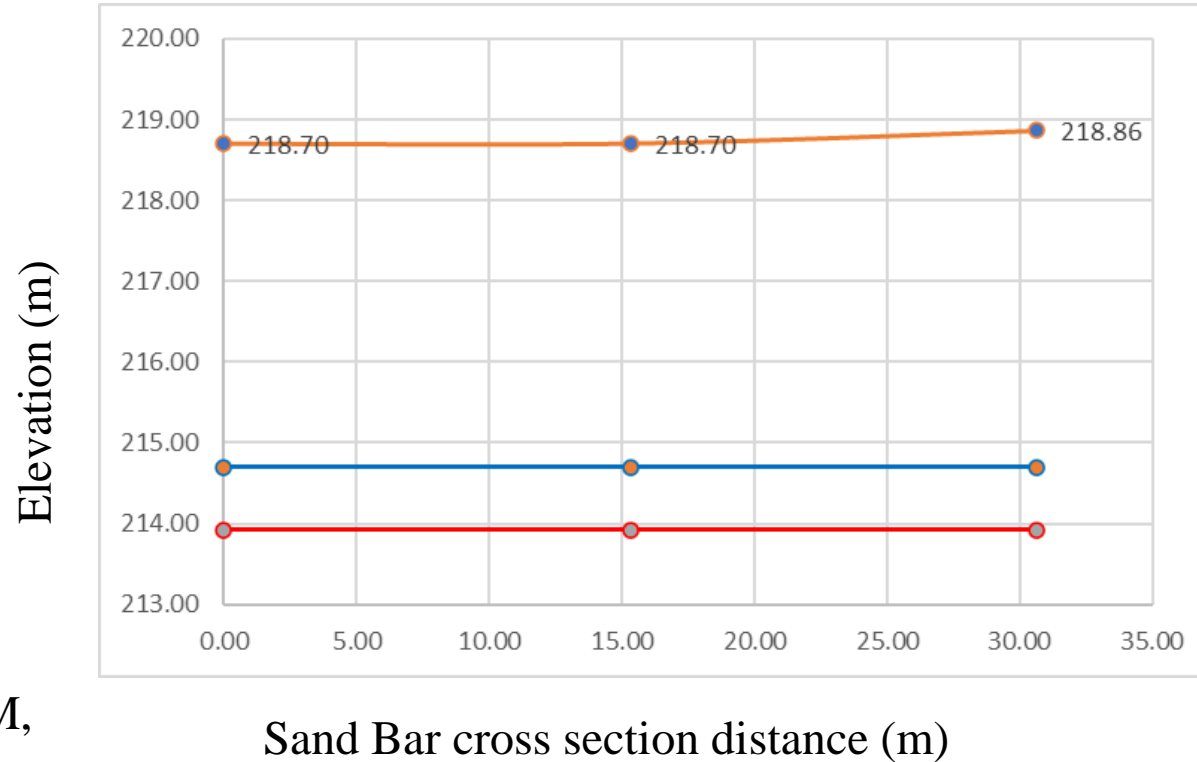
- Post monsoon Elevation
- Thalweg line
- Red Line



The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Cross Section Sand Bar PO_KT_DW_BS_14(X)



Post Thickness
3.00
3.00
3.16
3.05

Calculation

- Potential Area(Ha.):0.3 Ha
 - Average Thickness:3
 - Bulk Density:1.57
- $0.3 * 3 * 1.57 * 10000 = 14130$ Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)= 8478 Tonnes

Post Monsoon

Average Thickness: 3.05

- Post monsoon Elevation
- Thalweg line
- Red Line



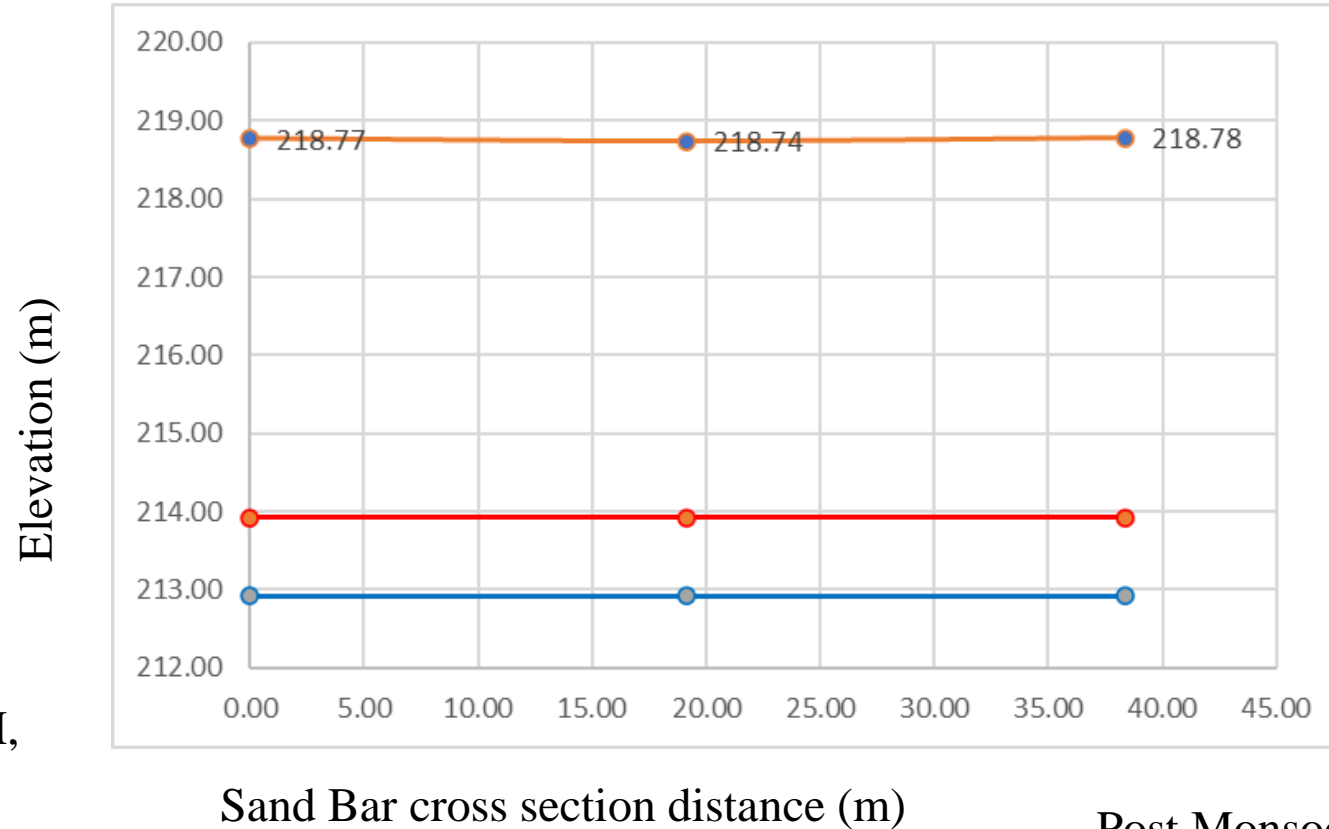
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Calculation

- Potential Area(Ha.):0.91
 - Average Thickness:3
 - Bulk Density:1.57
- $0.91 * 3 * 1.57 * 10000 = 42861$
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=25716.6

Cross Section Sand Bar
 PO_KT_DW_BS_14(VIII)



Post Thickness
4.85
4.82
4.86
4.84

Post Monsoon

Average Thickness:4.84

- Post monsoon Elevation
- Thalweg line
- Red Line



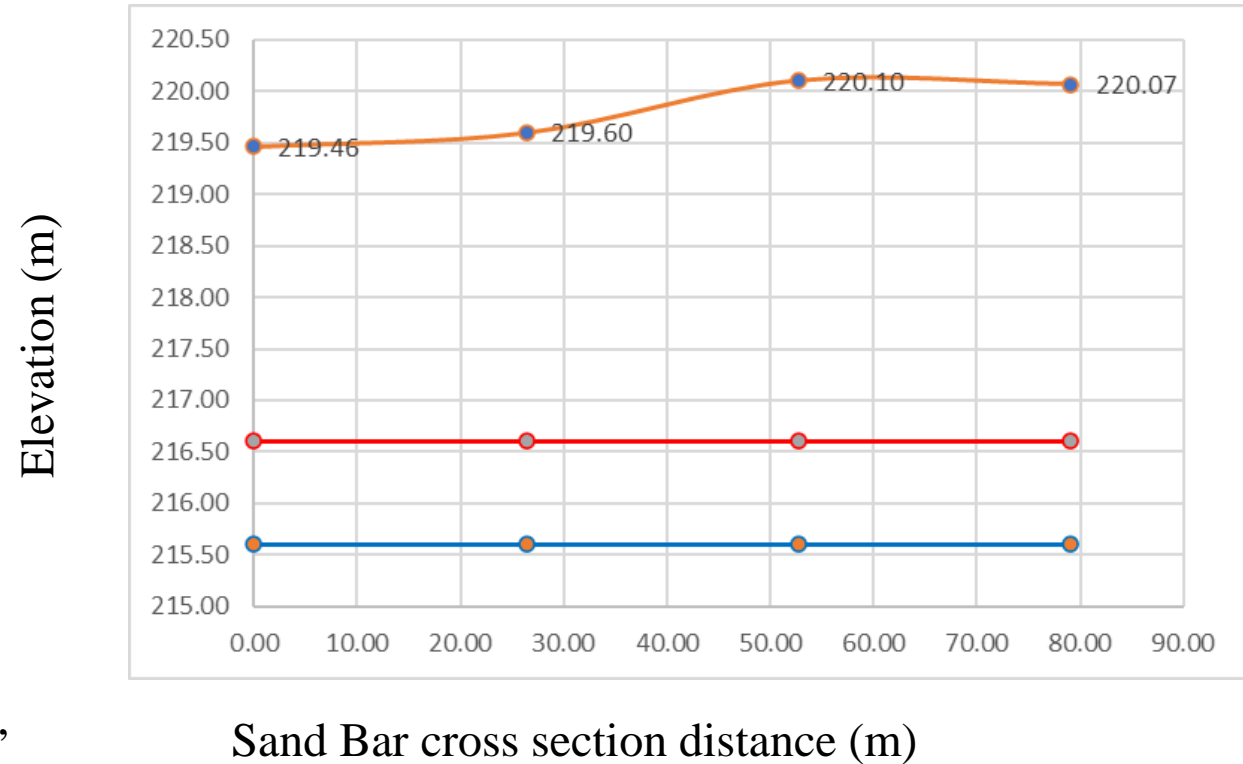
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Calculation

- Potential Area(Ha.):2.33
- Average Thickness: 3
- Bulk Density:1.57
- 2.33*3*1.57*10000=109743
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)=65845.8

Cross Section Sand Bar
 PO_KT_DW_BS_14(III)



Post Thickness
2.86
3.00
3.50
3.47
3.21

Post Monsoon

Average Thickness: 3.21

- Post monsoon Elevation
- Thalweg line
- Red Line



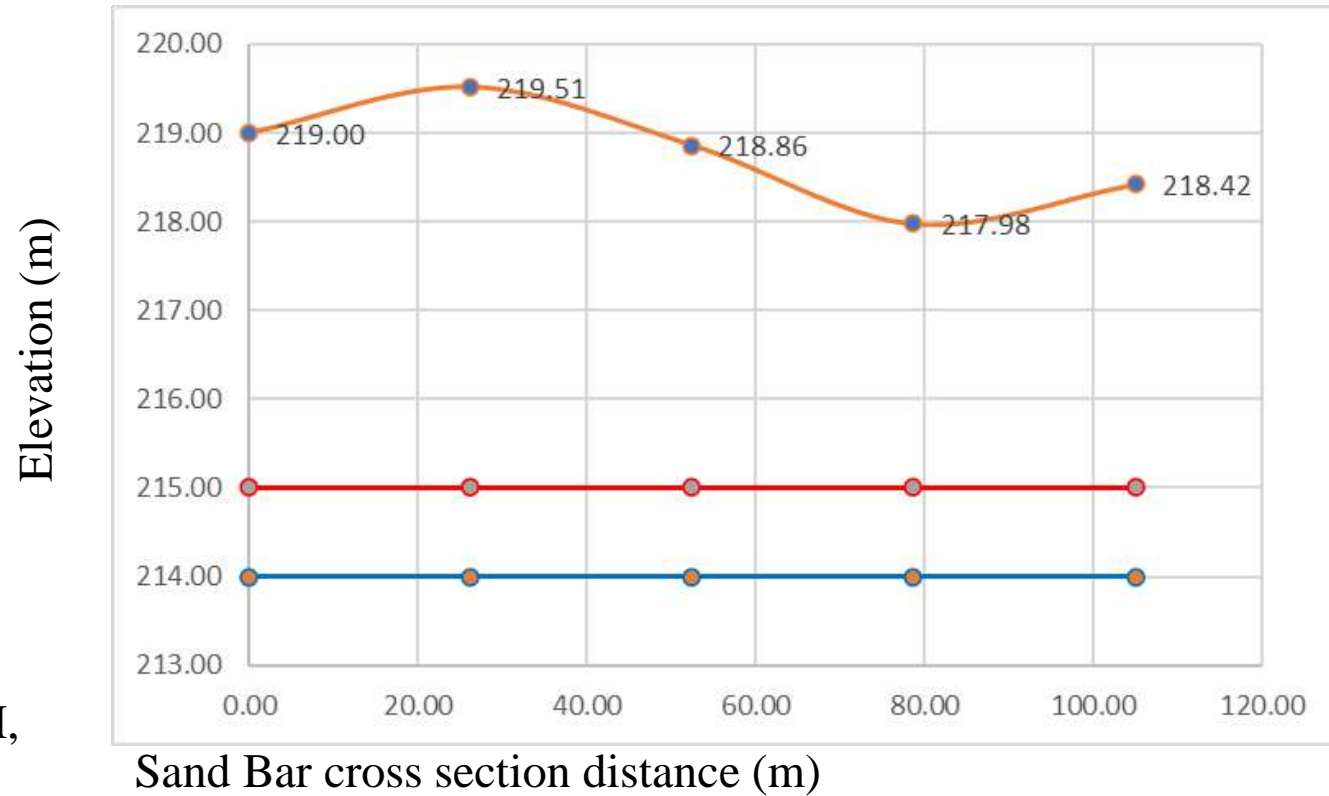
The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

Calculation

- Potential Area(Ha.):0.96 Ha
 - Average Thickness: 3
 - Bulk Density: 1.57
- $0.96 * 3 * 1.57 * 10000 = 45216$ Tonnes
- Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)= 27129.6

Cross Section Sand Bar
 PO_KT_DW_BS_14(II)



Post Thickness
4.00
4.51
3.86
2.98
3.42
3.75

Post Monsoon

Average Thickness: 3.75

- Post monsoon Elevation
- Thalweg line
- Red Line



The levels given in the cross- section as observed in the field has been checked and found nearly matching with the office record.

Source- Primary Data generated by DGPS
 Hi- Target DGPS (Model No. V30plus))

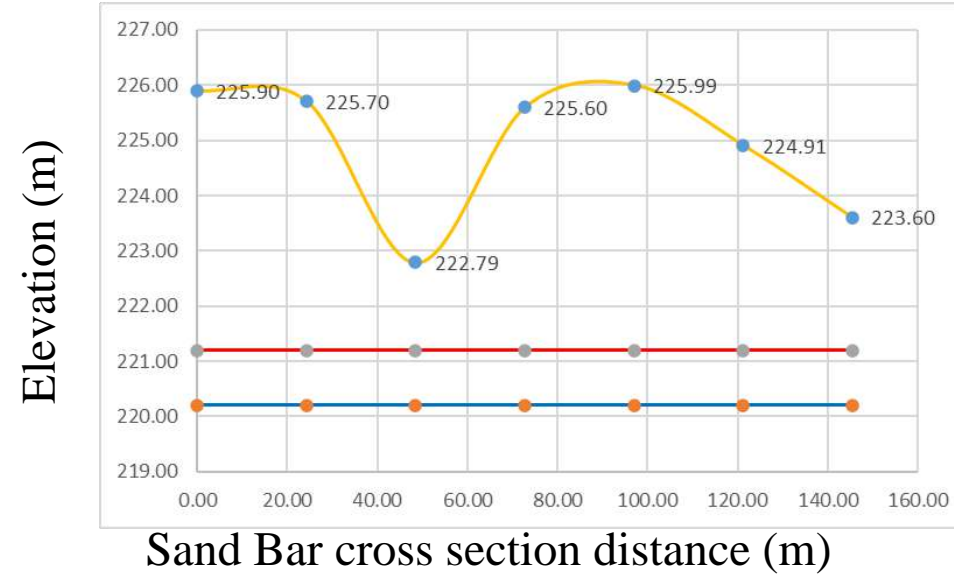
Calculation

- Potential Area(Ha.): 4.66 Ha
- Average Thickness: 0.92 m
- Bulk Density: 1.53
- Total Excavation-
 $4.66 * 1 * 10000 * 1.53 = 65594.16$
 Tonnes
- Total excavation in Tonnes
 (Considering 60% as per EMGSM, 2020)= 39356.496
 Tonnes



- Red Line
- Pre monsoon Elevation
- Post monsoon Elevation
- Thalweg line

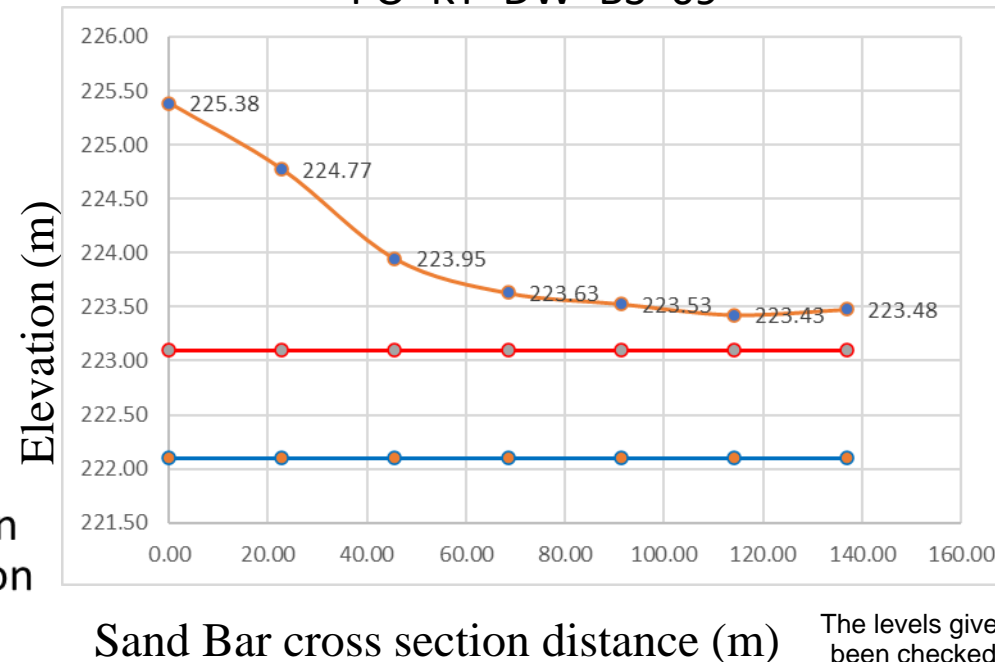
**Cross Section Sand Bar
 PR_KT_DW_BS_09**



Pre Thickness
4.70
4.50
1.59
4.40
4.79
3.71
2.40
3.73

Pre Monsoon
Average Thickness: 3.73

PO KT DW BS 09



Post Thickness
2.28
1.67
0.85
0.53
0.43
0.33
0.38
0.92

Post Monsoon
Average Thickness: 0.92

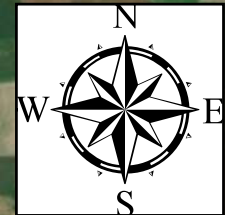
The levels given in the cross-section as observed in the field has been checked and found nearly matching with the office record.

Plate V
Route Map (Riverbed & Agricultural Sites)



75°20'0"E

75°21'0"E

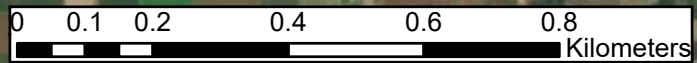


Kapurthala Beas 1

A

Haul Road 1 (1.93km)

A'



Legend

- Placemark
- Pakka Road
- Haul Road 115



75°20'0"E

75°21'0"E

31°31'0"N

31°31'0"N

75°12'0"E

75°13'0"E

75°14'0"E

75°15'0"E



Kapurthala Beas 2B
 Kapurthala Beas 3

B

C

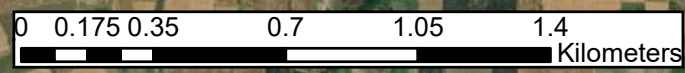
C'

B'

Haul Road 2 (5.88km)

Legend

- Placemark
- Pakka Road
- Haul Road



75°12'0"E

75°13'0"E

75°14'0"E

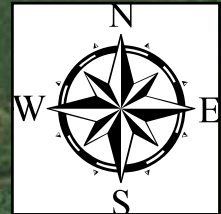
75°15'0"E

31°26'0"N

31°26'0"N

31°25'0"N

31°25'0"N



Kapurthala Beas 2

Kapurthala Beas 3

B

C

Haul Road 3 (0.64km)

Haul Road 2 (5.88km)

Legend

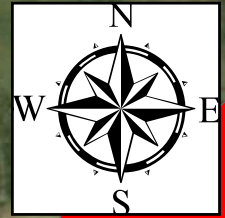
- Placemark
- Pakka Road
- Haul Road



31°26'0"N

31°26'0"N

75°11'0"E



Kapurthala Beas 4

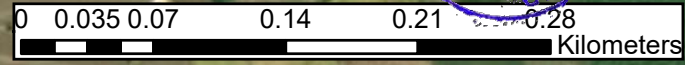
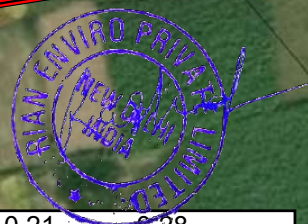
Haul Road 4 (4.35km)

D

Haul Road 5 (0.91km)

E

Kapurthala Beas 5



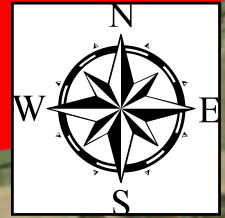
Legend

- Placemark
- Pakka Road
- Haul Road

31°24'0"N

31°24'0"N

75°11'0"E



Kapurthala Beas 6

F

Haul Road 6 (3.19km)

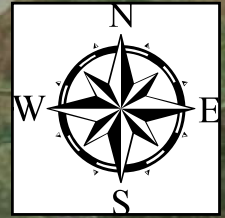


Legend

- Placemark
- Pakka Road
- Haul Road

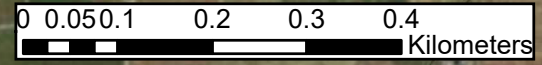
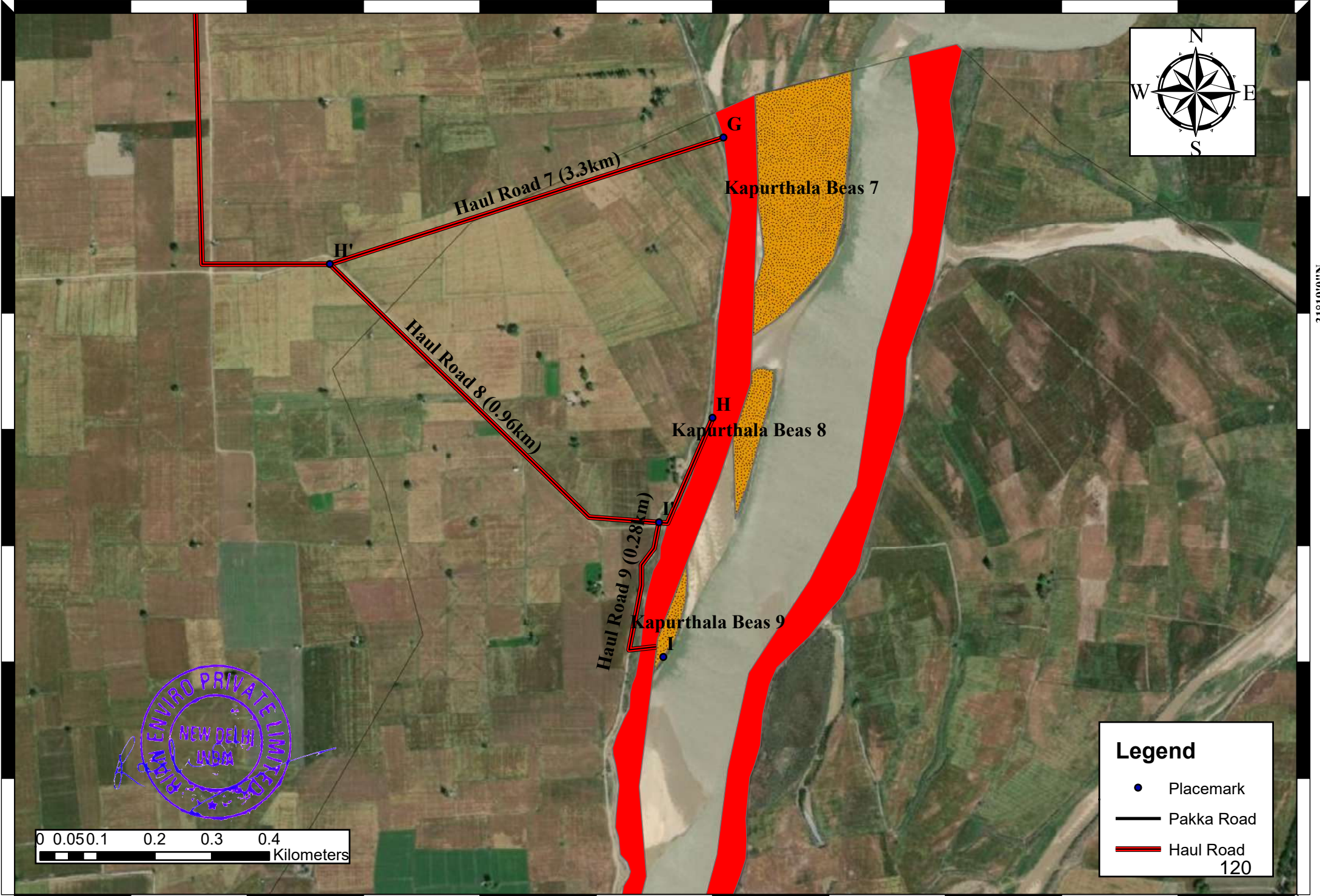
119

75°7'0"E



31°19'0"N

31°19'0"N



Legend

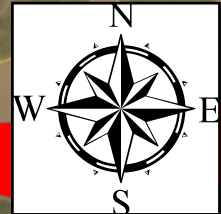
- Placemark
- Pakka Road
- Haul Road 120

75°7'0"E

75°6'0"E

31°17'0"N

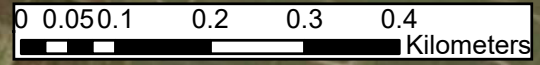
31°17'0"N



Haul Road 10 (4.51km)

Kapurthala Beas 10

J



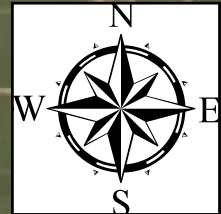
Legend

- Placemark
- Pakka Road
- Haul Road

121

75°6'0"E

75°7'0"E



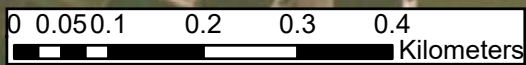
31°16'0"N

31°16'0"N

Kapurthala Beas II

K'

Haul Road 11 (1.7km)



Legend

- Placemark
- Pakka Road
- Haul Road 122

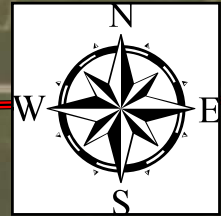
75°7'0"E

75°6'0"E

75°7'0"E

31°15'0"N

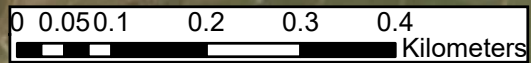
31°15'0"N



Kapurthala Beas 12

Haul Road 12 (3.16km)

L



Legend

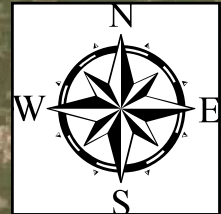
- Placemark
- Pakka Road
- Haul Road 123



75°6'0"E

75°7'0"E

75°3'0"E 75°4'0"E 75°5'0"E 75°6'0"E 75°7'0"E 75°8'0"E 75°9'0"E



31°17'0"N

31°17'0"N

Haul Road 10 (4.51km)

J Kapurthala Beas 10

31°16'0"N

31°16'0"N

K' Kapurthala Beas 11

31°15'0"N

31°15'0"N

M Kapurthala Beas 13

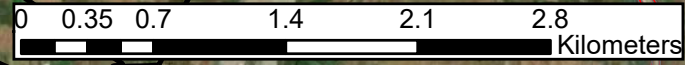
K'

L'

31°14'0"N

31°14'0"N

Kapurthala Beas 12L



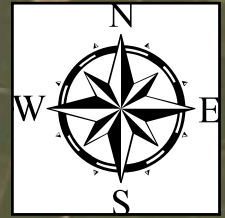
Legend

- Placemark
- Pakka Road
- Haul Road 124



75°3'0"E 75°4'0"E 75°5'0"E 75°6'0"E 75°7'0"E 75°8'0"E 75°9'0"E

75°5'0"E



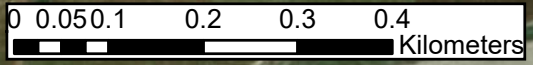
31°16'0"N

31°16'0"N

Haul Road 13 (4.23km)

M

Kapurthala Beas 13



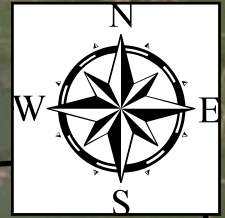
Legend

- Placemark
- Pakka Road
- ▬ Haul Road

75°5'0"E

(Riverbed Sites)
(Non - Replenish site & Agriculture site)





Mand Raipur Aaraiyan
Mand Raipur Aaraiyan

N

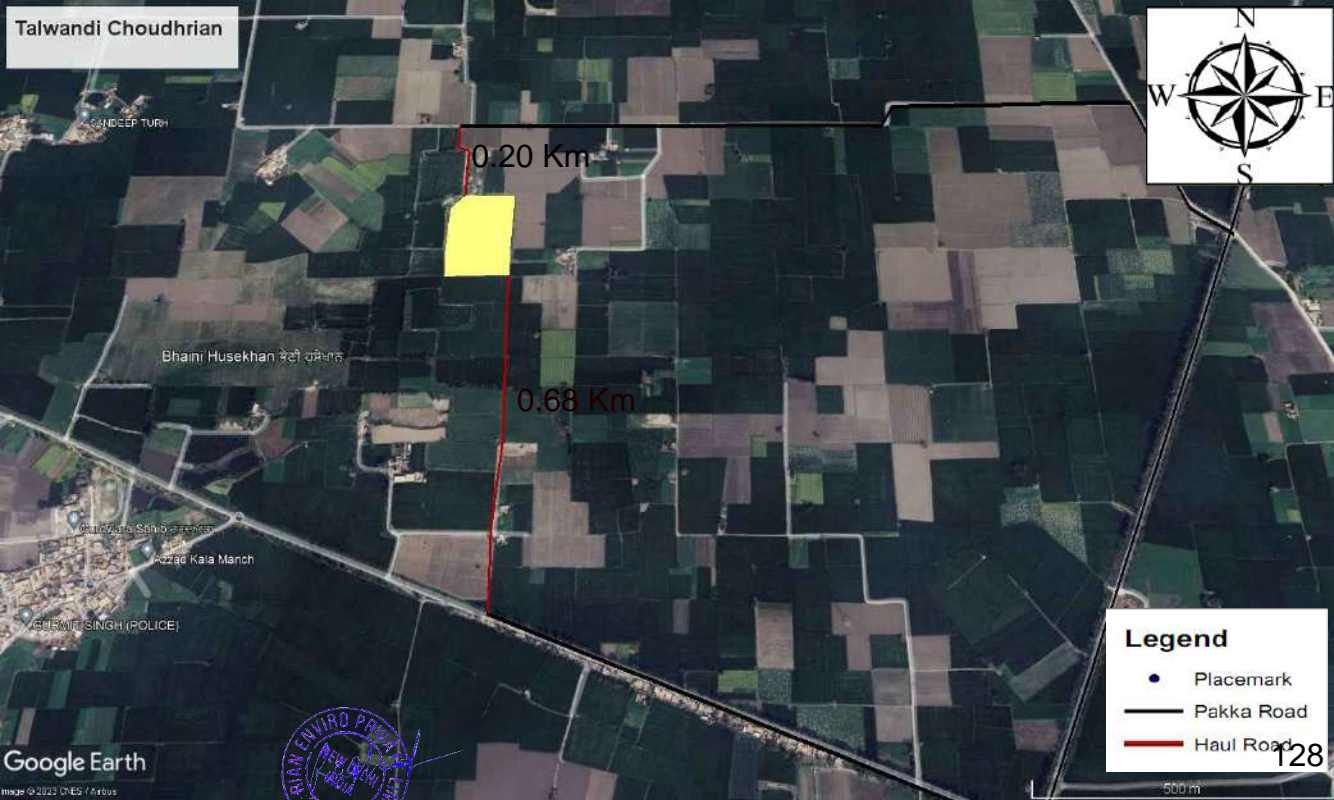
Mand Raipur Haul Road (1.82km)

N'



Legend

- Placemark
- Pakka Road
- Haul Road



SANDEEP TURH

0.20 Km



Bhaini Husekhan ਖੇਡੀ ਹਮੇਯਾਨ

0.68 Km

Chowdhry Sandh Arreha

Kazac Kala Manch

GAUR, JI SINGH (POLICE)

Legend

- Placemark
- Pakka Road
- Haul Road



Annexure A
(Annexure as prescribed in the EMGSM, 2020)



Annexure-I**Details of Sand/M-Sand Sources****a) Rivers:**

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Beas	70.42	Perennial

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSUetc.	Location	District	Tehsil	Village	Size(Ha)
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

c) Patta Lands/Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
Pal Singh, Nachatar, Achar Singh S/O Balbir Singh, Harjinder Singh, Gurvinder Singh, S/o Fakkar Singh	74//17,18,24,86/5	1.69	Kapurthala	Sultanpur Lodhi	Talwandi Chaudhrian	Yes
Total		1.69				

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

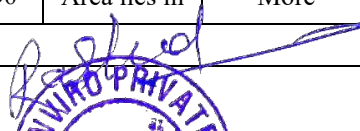
Note: For inclusion of M-Sand Plant/Patta Land in DSR the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them the right to operate the M-Sand Plant/Sand Mining lease.



Annexure-II

List of Potential Mining Leases (existing & proposed) Rivers

SL No.	River Details	Sandbars Code	Lease details	AREA (Ha)	Distance (in KM) from PA/BR/WC	Distance from Forest Area (in KM)	Minin g leases within 500 meters (if yes cluster area)	Depth of the Deposits [Actual average depth or 3m (in case actual average depth exceeds 3m)	Bulk Density	Total excavation in Tonnes	Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed
1	Beas		Safderpur	4.29	Area lies in Beas River Conservation reserve	More than 500 m				160285		Sand	Existing
2	Beas		Mand Gurmukh Singh Wala	5.26	Area lies in Beas River Conservation reserve	More than 500 m				170900		Sand	Existing
3	Beas		Mand Raipur Arayian	4.03	Area lies in Beas River Conservation reserve	More than 500 m				181350		Sand	Existing
4	Beas		Fatehvala	3.29	Area lies in Beas River Conservation reserve	More than 500 m				74410		Sand	Existing
5	Beas		Mand Sabk Desal	4.8	Area lies in Beas River Conservation reserve	More than 500 m				216000		Sand	Existing
1	Beas	PO_KT_DW_B S_09	Kapurthala Beas 1	4.66	Area lies in Beas River Conservation reserve	More than 500 m	No	0.92	1.53	65594.16	39356.5	Sand	Proposed with condition
2		PO_KT_DW_B S_14(II)	Kapurthala Beas 2	0.96	Area lies in	More	Yes,	3	1.57	45216	27129.6	Sand	Proposed



Enforcement & Monitoring Guidelines for Sand Mining

				Beas River Conservation reserve	than 500 m	Area: 3.29 Ha.						with condition
3	PO_KT_DW_B S_14(III)	Kapurthala Beas 3	2.33	Area lies in Beas River Conservation reserve	More than 500 m		3	109743	65845.8	Sand	Proposed with condition	
4	PO_KT_DW_B S_14(VIII)	Kapurthala Beas 4	0.91	Area lies in Beas River Conservation reserve	More than 500 m	No	3	42861	25716.6	Sand	Proposed with condition	
5	PO_KT_DW_B S_14(X)	Kapurthala Beas 5	0.3	Area lies in Beas River Conservation reserve	More than 500 m	Yes, Area: 1.67 Ha.	3	14130	8478	Sand	Proposed with condition	
6	PO_KT_SL_BS _14(XIII)	Kapurthala Beas 6	1.37	Area lies in Beas River Conservation reserve	More than 500 m		3	64527	38716.2	Sand	Proposed with condition	
7	PO_KT_SL_BS _14(XVIII)	Kapurthala Beas 7	5.73	Area lies in Beas River Conservation reserve	More than 500 m		3	269883	161929.8	Sand	Proposed with condition	
8	PO_KT_SL_BS _14(XIX)	Kapurthala Beas 8	0.88	Area lies in Beas River Conservation reserve	More than 500 m	Yes, Area: 6.97 Ha.	1.35	18651.6	11190.96	Sand	Proposed with condition	
9	PO_KT_SL_BS _14(XX)	Kapurthala Beas 9	0.36	Area lies in Beas River Conservation reserve	More than 500 m		3	16956	10173.6	Sand	Proposed with condition	
10	PO_KT_SL_BS _17	Kapurthala Beas 10	0.25	Area lies in Beas River Conservation reserve	More than 500 m	No	3	11775	7065	Sand	Proposed with condition	
11	PO_KT_SL_BS _18	Kapurthala Beas 11	7.19	Area lies in Beas River Conservation reserve	More than 500 m	No	3	338649	203189.4	Sand	Proposed with condition	
12	PO_KT_SL_BS _19	Kapurthala Beas 12	16.06	Area lies in Beas River Conservation reserve	More than 500 m	No	3	756426	453855.6	Sand	Proposed with condition	
13	PO_KT_SL_BS	Kapurthala Beas 13	0.59	Area lies in	More	No	3	27789	16673.4	Sand	Proposed	



Enforcement & Monitoring Guidelines for Sand Mining

		_22		Beas River Conservation reserve	than 500 m							with condition
			41.59						1782200.76	1069320.46		

Note: The average depth for each potential sandbar has been mentioned in cross sections available on pages 101 to 113.

Lease Details	Area (Ha.)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Depth	Bulk Density	Total excavation in Tonnes	Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed
Mand Raipur Aaraiyan	4.07	Area lies in Beas River Conservation reserve	More than 500 m	NO	2.4	1.57	1,53,357.6	92,014.56	RBM	Proposed with condition

Note: The above sites are recommended by Sub Divisional Committee except DFO. The sub- Divisional Committee report is attached as Annexure E.

- As per Sub Divisional Committee, the riverbed sites of River Beas from Sl. No. 1 – 13 & Mand Raipur Aaraiyan have been provisionally included in Annexure – II subjected to grant of approval of NBWL to be obtained through Chief Wildlife Warden, Punjab.
- Note: Department of Forests and Wildlife Preservation (Forest Branch), Government of Punjab, via notification no. 34/13/2017-Ft-5/1052756/1 Chandigarh, date 29.08.2017, declared area of River Beas as “Conservation Reserve” from date of notification. Details of area as under:
“River Beas with all water channels from 52 Head Talwara to Harike Barrage including all Government area in River Beas.”



Enforcement & Monitoring Guidelines for Sand Mining

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy.No	Area (Ha.)	District	Tehsil	Village	Total Reserve (MT) Considering Bulk Density 1.57	Total Mineral to be mined (MT) (Considering 60%)	Existing /Proposed
Baljinder singh s/o Saroop Singh Shabba Singh s/o Bhagat singh	14//11,14//14,24//16,25//1,24//5,24//6,24//15/1,24//15/221//25,21//23,21//24	3.8	Kapurthala	Sultanpur Lodhi	Faridpur	171000	-	Existing
Pal Singh, Nachatar, Achar Singh S/O Balbir Singh, Harjinder Singh, Gurvinder Singh,S/o Fakkar Singh	74//17,18,24,86//5	1.69	Kapurthala	Sultanpur Lodhi	Talwandi Chaudhrian	71,639.1	42,983.46	Proposed
Total(Proposed)		1.69				71,639.1	42,983.46	

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing &proposed)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)	Quantity MT / Year (Balance Quantity)	Existing /Proposed
Beas	State Govt.	31.3776988"N 75.1662700"E	Kapurthala	Sultanpur lodhi & Kapurthala	Amritpur Includes Sabk Desal	47.22	-	Existing
Beas	State Govt.	31.5057624"N 75.3005230"E	Kapurthala	Kapurthala	Mand Rampur	33.13	-	Existing



Note: The quantity of De-silting shall be assessed as per actual site conditions at the time of de- silting and got approved from the competent authority.

M-Sand Plants :(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo-locatio n	Quantity Tonnes/Annum	Existing/Proposed
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available



Annexure-III**Cluster & Contiguous Cluster details****Clusters:**

River Name	Cluster No.	Lease No	Location (Riverbed Patta Land)	Village	Area (in Ha.)	Total Excavation (Ton)	Total Mineral Excavation (Ton) (Considering 60% as per EMGSM, 2020)
Beas	1	Kapurthala Beas 2,3	Riverbed	-	3.29	154959	92975.4
	2	Kapurthala Beas 5,6	Riverbed	-	1.67	78657	47194.2
	3	Kapurthala Beas 7,8,9	Riverbed	-	6.97	305490.6	183294.36
Total(Riverbed)					11.93	539106.6	323463.96

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number Of Leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area Of Cluster (Ha)	Total Mineral Excavation (Ton)
Beas	NA	NA	NA	NA	NA	NA	NA	NA



Annexure-IV

Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tipper s /day of lease	Number of tipper s /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ Unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
Kapurthala Beas 1	A -A'	22	NA	1.93	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 2	B-B'	15	NA	5.58	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 3	C-C'	37	NA	0.65	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 4	D-D'	14	NA	4.35	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 5	E-E'	5	NA	0.92	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 6	F-F'	22	NA	3.19	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 7	G-G'	90	NA	3.31	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 8	H-H'	6	NA	0.97	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 9	I-I'	6	NA	0.28	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 10	J-J'	4	NA	4.52	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 11	K-K'	113	NA	4.24	Unpaved	Unpaved	Lease Owner	Route Map attached

Kapurthala Beas 12	L-L'	252	NA	1.71	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 13	M-M'	9	NA	3.16	Unpaved	Unpaved	Lease Owner	Route Map attached
Mand Raipur Aaraiyan	N-N'	51	NA	1.82	Unpaved	Unpaved	Lease Owner	Route Map attached
Total		645						

Cluster:

Cluster No	Transportation Route No	Number of tipper s /day Of cluste R	Number of Tipper s /day of all The Cluste rs on Route	Leng th of Rout e in KM	Type Of Road (Black Toppe d/ Unpav ed)	Recommend ation for road(Black Topped/ unpaved)	The road will be Construc ted by Govt/Lea Se Owner	Route Map & Location
Kapurthala Beas 2,3	B-B' C-C'	52	NA	6.53	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 5,6	E-E' F-F'	27	NA	4.11	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 7,8,9	G-G' H-H' I-I'	102	NA	4.56	Unpaved	Unpaved	Lease Owner	Route Map attached
Total(Proposed)		181						

Note: The above mention transportation routes are as per the present infrastructure, which may change according to the development/ identifications of new routes after temporary acquisition of land if required.



Final List of Potential Mining Leases (Proposed)

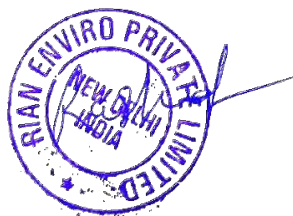
SL No.	River Details	Sandbars Code	Name of Block	AREA (Ha)	Distance (in KM) from PA/BR/WC	Distance from Forest Area (in KM)	Minin g leases within 500 meters (if yes cluster area)	Depth of the Deposits [Actual average depth or 3m (in case actual average depth exceeds 3m)	Bulk Density	Total excavation in Tonnes	Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed
1	Beas	PO_KT_DW_BS_09	Kapurthala Beas 1	4.66	Area lies in Beas River Conservation reserve	More than 500 m	No	0.92	1.53	65594.16	39356.5	Sand	Proposed with condition
2		PO_KT_DW_BS_14(II)	Kapurthala Beas 2	0.96	Area lies in Beas River Conservation reserve	More than 500 m	Yes, Area: 3.29 Ha.	3	1.57	45216	27129.6	Sand	Proposed with condition
3		PO_KT_DW_BS_14(III)	Kapurthala Beas 3	2.33	Area lies in Beas River Conservation reserve	More than 500 m		3		109743	65845.8	Sand	Proposed with condition
4		PO_KT_DW_BS_14(VIII)	Kapurthala Beas 4	0.91	Area lies in Beas River Conservation reserve	More than 500 m	No	3		42861	25716.6	Sand	Proposed with condition
5		PO_KT_DW_BS_14(X)	Kapurthala Beas 5	0.3	Area lies in Beas River Conservation reserve	More than 500 m	Yes, Area: 1.67 Ha.	3		14130	8478	Sand	Proposed with condition
6		PO_KT_SL_BS_14(XIII)	Kapurthala Beas 6	1.37	Area lies in Beas River Conservation	More than 500 m		3		64527	38716.2	Sand	Proposed with condition



Enforcement & Monitoring Guidelines for Sand Mining

				reserve							
7	PO_KT_SL_B S_14(XVIII)	Kapurthala Beas 7	5.73	Area lies in Beas River Conservation reserve	More than 500 m	Yes, Area: 6.97 Ha.	3	269883	161929.8	Sand	Proposed with condition
8	PO_KT_SL_B S_14(XIX)	Kapurthala Beas 8	0.88	Area lies in Beas River Conservation reserve	More than 500 m		1.35	18651.6	11190.96	Sand	Proposed with condition
9	PO_KT_SL_B S_14(XX)	Kapurthala Beas 9	0.36	Area lies in Beas River Conservation reserve	More than 500 m		3	16956	10173.6	Sand	Proposed with condition
10	PO_KT_SL_B S_17	Kapurthala Beas 10	0.25	Area lies in Beas River Conservation reserve	More than 500 m	No	3	11775	7065	Sand	Proposed with condition
11	PO_KT_SL_B S_18	Kapurthala Beas 11	7.19	Area lies in Beas River Conservation reserve	More than 500 m	No	3	338649	203189.4	Sand	Proposed with condition
12	PO_KT_SL_B S_19	Kapurthala Beas 12	16.06	Area lies in Beas River Conservation reserve	More than 500 m	No	3	756426	453855.6	Sand	Proposed with condition
13	PO_KT_SL_B S_22	Kapurthala Beas 13	0.59	Area lies in Beas River Conservation reserve	More than 500 m	No	3	27789	16673.4	Sand	Proposed with condition
			41.59					1782200.76	1069320.46		

Note: The average depth for each potential sandbar has been mentioned in cross sections available on pages 101 to 113.

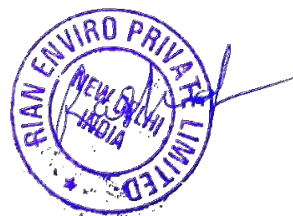


Enforcement & Monitoring Guidelines for Sand Mining

Lease Details	Area (Ha.)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Depth	Bulk Density	Total excavation in Tonnes	Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed
Mand Raipur Aaraiyan	4.07	Area lies in Beas River Conservation reserve	More than 500 m	NO	2.4	1.57	1,53,357.6	92,014.56	RBM	Proposed with condition

Note: The above sites are recommended by Sub Divisional Committee except DFO. The sub- Divisional Committee report is attached as Annexure E.

- As per Sub Divisional Committee, the riverbed sites of River Beas from Sl. No. 1 – 13 & Mand Raipur Aaraiyan have been provisionally included in Annexure – II subjected to grant of approval of NBWL to be obtained through Chief Wildlife Warden, Punjab.
- Note: Department of Forests and Wildlife Preservation (Forest Branch), Government of Punjab, via notification no. 34/13/2017-Ft-5/1052756/1 Chandigarh, date 29.08.2017, declared area of River Beas as “Conservation Reserve” from date of notification. Details of area as under:
“River Beas with all water channels from 52 Head Talwara to Harike Barrage including all Government area in River Beas.”



Final Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy.No	Area (Ha.)	District	Tehsil	Village	Total Reserve (MT) Considering Bulk Density 1.57	Total Mineral to be mined (MT) (Considering 60%)	Existing /Proposed
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Note: As adjoining land owners, local villagers and gram panchayat of Village Talwandi chaudhria has objection regarding any mining in this site hence this site is rejected with prior consultation of Sub divisional committee and worthy Deputy commissioner kapurthala. The objection received during Public Consultation is attached as Annexure - J of page no. 210.

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing &proposed)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)	Quantity MT / Year (Balance Quantity)	Existing /Proposed
Beas	State Govt.	31.3776988"N 75.1662700"E	Kapurthala	Sultanpur lodhi & Kapurthala	Amritpur Includes Sabk Desal	47.22	-	-
Beas	State Govt.	31.5057624"N 75.3005230"E	Kapurthala	Kapurthala	Mand Rampur	33.13	-	-

Note: The quantity of De-silting shall be assessed as per actual site conditions at the time of de- silting and got approved from the competent authority.



Enforcement & Monitoring Guidelines for Sand Mining

M-Sand Plants :(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum	Existing/Proposed
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available



Annexure- VI**Final Cluster & Contiguous Cluster details****Clusters:**

River Name	Cluster No.	Lease No	Location (Riverbed Patta Land)	Village	Area (in Ha.)	Total Excavation (Ton)	Total Mineral Excavation (Ton) (Considering 60% as per EMGSM, 2020)
Beas	1	Kapurthala Beas 2,3	Riverbed	-	3.29	154959	92975.4
	2	Kapurthala Beas 5,6	Riverbed	-	1.67	78657	47194.2
	3	Kapurthala Beas 7,8,9	Riverbed	-	6.97	305490.6	183294.36
Total(Riverbed)					11.93	539106.6	323463.96

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number Of Leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area Of Cluster (Ha)	Total Mineral Excavation (Ton)
Beas	NA	NA	NA	NA	NA	NA	NA	NA



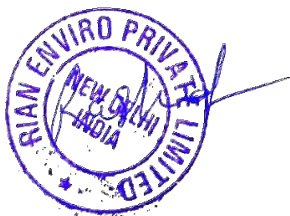
Final Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tipper s /day of lease	Number of tipper s /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ Unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
Kapurthala Beas 1	A -A'	22	NA	1.93	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 2	B-B'	15	NA	5.58	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 3	C-C'	37	NA	0.65	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 4	D-D'	14	NA	4.35	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 5	E-E'	5	NA	0.92	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 6	F-F'	22	NA	3.19	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 7	G-G'	90	NA	3.31	Unpaved	Unpaved	Lease Owner	Route Map attached



Enforcement & Monitoring Guidelines for Sand Mining

Kapurthala Beas 8	H-H'	6	NA	0.97	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 9	I-I'	6	NA	0.28	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 10	J-J'	4	NA	4.52	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 11	K-K'	113	NA	4.24	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 12	L-L'	252	NA	1.71	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 13	M-M'	9	NA	3.16	Unpaved	Unpaved	Lease Owner	Route Map attached
Mand Raipur Aaraiyan	N-N'	51	NA	1.82	Unpaved	Unpaved	Lease Owner	Route Map attached
Total		645						



Enforcement & Monitoring Guidelines for Sand Mining

Cluster:

Cluster No	Transportation Route	Number of tipper s /day Of cluster	Number of Tipper s /day of all The Clusters on Route	Length of Route in KM	Type Of Road (Black Topped/ Unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
Kapurthala Beas 2,3	B-B' C-C'	52	NA	6.53	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 5,6	E-E' F-F'	27	NA	4.11	Unpaved	Unpaved	Lease Owner	Route Map attached
Kapurthala Beas 7,8,9	G-G' H-H' I-I'	102	NA	4.56	Unpaved	Unpaved	Lease Owner	Route Map attached
Total(Proposed)		181						

Note: The above mention transportation routes are as per the present infrastructure, which may change according to the development/ identifications of new routes after temporary acquisition of land if required.

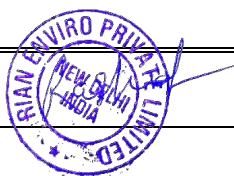


**Annexure B
Potential Sand Blocks on Beas River of Kapurthala District**



Potential Block Details

SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
PO_KT_DW_BS_0 1	1	31° 33' 49.799" N	75° 21' 31.798" E	DHILWAN
	2	31° 33' 55.454" N	75° 21' 30.692" E	
	3	31° 34' 1.255" N	75° 21' 35.592" E	
	4	31° 34' 2.228" N	75° 21' 38.010" E	
	5	31° 34' 0.081" N	75° 21' 38.626" E	
	6	31° 33' 57.979" N	75° 21' 37.954" E	
	7	31° 33' 54.012" N	75° 21' 36.907" E	
	8	31° 33' 51.746" N	75° 21' 34.370" E	
PO_KT_DW_BS_0 2	1	31° 34' 3.165" N	75° 21' 40.090" E	DHILWAN
	2	31° 33' 59.009" N	75° 21' 41.388" E	
	3	31° 33' 45.183" N	75° 21' 42.098" E	
	4	31° 33' 35.034" N	75° 21' 43.262" E	
	5	31° 33' 31.394" N	75° 21' 40.320" E	
	6	31° 33' 30.564" N	75° 21' 35.590" E	
	7	31° 33' 29.228" N	75° 21' 33.595" E	
	8	31° 33' 25.464" N	75° 21' 34.770" E	
	9	31° 33' 19.716" N	75° 21' 32.374" E	
	10	31° 33' 15.568" N	75° 21' 23.698" E	
	11	31° 33' 20.872" N	75° 21' 24.435" E	
	12	31° 33' 29.286" N	75° 21' 27.000" E	
	13	31° 33' 32.662" N	75° 21' 26.989" E	
	14	31° 33' 51.839" N	75° 21' 34.844" E	
	15	31° 33' 54.712" N	75° 21' 37.851" E	
PO_KT_DW_BS_0 4	1	31° 32' 57.729" N	75° 21' 8.387" E	DHILWAN
	2	31° 32' 56.975" N	75° 21' 5.822" E	
	3	31° 33' 2.016" N	75° 21' 9.369" E	
	4	31° 33' 5.615" N	75° 21' 12.916" E	
	5	31° 33' 5.290" N	75° 21' 13.857" E	
	6	31° 33' 4.239" N	75° 21' 14.191" E	
	7	31° 33' 0.943" N	75° 21' 13.206" E	
PO_KT_DW_BS_0 5	1	31° 32' 54.391" N	75° 20' 56.018" E	DHILWAN
	2	31° 32' 53.831" N	75° 20' 52.412" E	
	3	31° 32' 55.929" N	75° 20' 54.284" E	
	4	31° 32' 56.981" N	75° 20' 54.808" E	
	5	31° 33' 1.020" N	75° 20' 55.729" E	
	6	31° 33' 3.598" N	75° 20' 57.578" E	
	7	31° 33' 7.203" N	75° 21' 2.521" E	
	8	31° 33' 6.145" N	75° 21' 5.392" E	



*District Survey Report
Kapurthala District,
Punjab*

SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	9	31° 33' 1.707" N	75° 21' 4.208" E	
	10	31° 32' 57.475" N	75° 21' 1.332" E	
PO_KT_DW_BS_08	1	31° 32' 20.781" N	75° 20' 8.898" E	DHILWAN
	2	31° 32' 24.378" N	75° 20' 10.867" E	
	3	31° 32' 24.549" N	75° 20' 11.518" E	
	4	31° 32' 25.682" N	75° 20' 12.260" E	
	5	31° 32' 30.815" N	75° 20' 14.850" E	
	6	31° 32' 33.526" N	75° 20' 20.693" E	
	7	31° 32' 33.268" N	75° 20' 21.395" E	
	8	31° 32' 30.428" N	75° 20' 22.045" E	
	9	31° 32' 27.134" N	75° 20' 20.080" E	
	10	31° 32' 25.594" N	75° 20' 16.709" E	
	11	31° 32' 22.305" N	75° 20' 12.692" E	
PO_KT_DW_BS_10	1	31° 31' 44.094" N	75° 19' 45.137" E	DHILWAN
	2	31° 31' 41.474" N	75° 19' 46.056" E	
	3	31° 31' 34.865" N	75° 19' 45.109" E	
	4	31° 31' 31.316" N	75° 19' 42.725" E	
	5	31° 31' 29.015" N	75° 19' 38.733" E	
	6	31° 31' 33.005" N	75° 19' 38.561" E	
	7	31° 31' 35.110" N	75° 19' 39.308" E	
PO_KT_DW_BS_14(II)	1	31° 26' 9.069" N	75° 12' 24.308" E	DHILWAN
	2	31° 26' 6.146" N	75° 12' 21.932" E	
	3	31° 26' 4.548" N	75° 12' 21.550" E	
	4	31° 26' 5.829" N	75° 12' 20.345" E	
	5	31° 26' 8.937" N	75° 12' 18.910" E	
PO_KT_DW_BS_14(III)	1	31° 25' 58.775" N	75° 12' 20.172" E	DHILWAN
	2	31° 25' 57.378" N	75° 12' 18.694" E	
	3	31° 25' 59.240" N	75° 12' 17.388" E	
	4	31° 26' 2.689" N	75° 12' 17.288" E	
	5	31° 26' 8.817" N	75° 12' 16.416" E	
	6	31° 26' 8.716" N	75° 12' 18.393" E	
	7	31° 26' 5.797" N	75° 12' 19.294" E	
	8	31° 26' 1.111" N	75° 12' 20.730" E	
PO_KT_DW_BS_14(IV)	1	31° 25' 54.518" N	75° 12' 5.711" E	DHILWAN
	2	31° 25' 54.148" N	75° 12' 4.839" E	
	3	31° 25' 55.950" N	75° 12' 4.177" E	
	4	31° 25' 57.155" N	75° 12' 4.362" E	
	5	31° 25' 59.227" N	75° 12' 6.484" E	
	6	31° 25' 59.398" N	75° 12' 7.529" E	
	7	31° 25' 58.043" N	75° 12' 7.236" E	



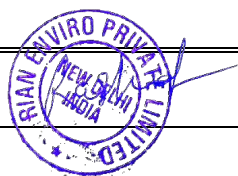
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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
PO_KT_DW_BS_1 4(V)	1	31° 25' 35.081" N	75° 11' 53.776" E	DHILWAN
	2	31° 25' 35.394" N	75° 11' 53.718" E	
	3	31° 25' 37.434" N	75° 11' 54.648" E	
	4	31° 25' 39.622" N	75° 11' 56.484" E	
	5	31° 25' 39.821" N	75° 11' 56.936" E	
	6	31° 25' 39.208" N	75° 11' 56.985" E	
	7	31° 25' 37.874" N	75° 11' 55.886" E	
	8	31° 25' 35.500" N	75° 11' 54.634" E	
PO_KT_DW_BS_1 4(VI)	1	31° 24' 39.833" N	75° 11' 31.814" E	DHILWAN
	2	31° 24' 41.216" N	75° 11' 30.387" E	
	3	31° 24' 43.221" N	75° 11' 30.821" E	
	4	31° 24' 44.517" N	75° 11' 32.657" E	
	5	31° 24' 43.673" N	75° 11' 33.162" E	
	6	31° 24' 40.863" N	75° 11' 32.743" E	
PO_KT_DW_BS_1 4(VII)	1	31° 24' 4.586" N	75° 11' 11.663" E	DHILWAN
	2	31° 24' 4.421" N	75° 11' 10.527" E	
	3	31° 24' 6.539" N	75° 11' 7.254" E	
	4	31° 24' 6.594" N	75° 11' 6.461" E	
	5	31° 24' 7.277" N	75° 11' 5.231" E	
	6	31° 24' 9.035" N	75° 11' 5.596" E	
	7	31° 24' 8.440" N	75° 11' 7.982" E	
	8	31° 24' 5.693" N	75° 11' 11.422" E	
PO_KT_DW_BS_1 4(VIII)	1	31° 23' 46.976" N	75° 11' 15.818" E	DHILWAN
	2	31° 23' 48.601" N	75° 11' 15.682" E	
	3	31° 23' 49.838" N	75° 11' 16.490" E	
	4	31° 23' 53.202" N	75° 11' 16.565" E	
	5	31° 23' 54.720" N	75° 11' 16.795" E	
	6	31° 23' 56.602" N	75° 11' 17.551" E	
	7	31° 23' 55.168" N	75° 11' 18.043" E	
	8	31° 23' 52.406" N	75° 11' 18.026" E	
	9	31° 23' 50.265" N	75° 11' 18.125" E	
	10	31° 23' 49.146" N	75° 11' 17.704" E	
	11	31° 23' 47.985" N	75° 11' 16.472" E	
PO_KT_DW_BS_1 4(X)	1	31° 23' 49.284" N	75° 11' 7.408" E	DHILWAN
	2	31° 23' 52.417" N	75° 11' 7.297" E	
	3	31° 23' 53.677" N	75° 11' 7.805" E	
	4	31° 23' 53.716" N	75° 11' 8.379" E	
	5	31° 23' 51.503" N	75° 11' 8.468" E	
PO_KT_DW_BS_1 4(XI)	1	31° 23' 38.281" N	75° 11' 10.314" E	DHILWAN
	2	31° 23' 37.947" N	75° 11' 8.627" E	



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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	3	31° 23' 39.280" N	75° 11' 7.433" E	
	4	31° 23' 41.070" N	75° 11' 8.517" E	
	5	31° 23' 42.447" N	75° 11' 11.420" E	
	6	31° 23' 41.524" N	75° 11' 11.557" E	
	7	31° 23' 40.166" N	75° 11' 11.133" E	
PO_KT_SL_BS_14 (XIII)	1	31° 23' 27.042" N	75° 10' 40.673" E	SULTANPUR LODHI
	2	31° 23' 33.704" N	75° 10' 45.807" E	
	3	31° 23' 33.671" N	75° 10' 47.615" E	
	4	31° 23' 33.151" N	75° 10' 47.820" E	
	5	31° 23' 32.084" N	75° 10' 47.652" E	
	6	31° 23' 31.390" N	75° 10' 47.159" E	
	7	31° 23' 27.682" N	75° 10' 43.485" E	
PO_KT_SL_BS_14 (XV)	1	31° 22' 11.165" N	75° 9' 48.399" E	SULTANPUR LODHI
	2	31° 22' 10.331" N	75° 9' 47.647" E	
	3	31° 22' 11.132" N	75° 9' 47.830" E	
	4	31° 22' 12.995" N	75° 9' 47.271" E	
	5	31° 22' 12.480" N	75° 9' 49.291" E	
PO_KT_SL_BS_14 (XVI)	1	31° 20' 59.262" N	75° 9' 58.679" E	SULTANPUR LODHI
	2	31° 20' 59.324" N	75° 9' 56.481" E	
	3	31° 20' 57.519" N	75° 9' 53.540" E	
	4	31° 21' 0.337" N	75° 9' 53.036" E	
	5	31° 21' 7.232" N	75° 9' 56.500" E	
	6	31° 21' 8.721" N	75° 10' 0.944" E	
	7	31° 21' 7.242" N	75° 10' 2.338" E	
	8	31° 21' 4.388" N	75° 10' 3.085" E	
	9	31° 21' 2.069" N	75° 10' 2.428" E	
PO_KT_SL_BS_14 (XVII)	1	31° 20' 37.717" N	75° 9' 30.345" E	SULTANPUR LODHI
	2	31° 20' 35.196" N	75° 9' 25.775" E	
	3	31° 20' 35.431" N	75° 9' 21.568" E	
	4	31° 20' 38.184" N	75° 9' 25.726" E	
	5	31° 20' 39.429" N	75° 9' 27.424" E	
	6	31° 20' 40.994" N	75° 9' 31.114" E	
	7	31° 20' 39.492" N	75° 9' 35.589" E	
	8	31° 20' 38.486" N	75° 9' 34.252" E	
PO_KT_SL_BS_14 (XVIII)	1	31° 18' 57.641" N	75° 6' 58.635" E	SULTANPUR LODHI
	2	31° 19' 0.414" N	75° 6' 58.759" E	
	3	31° 19' 2.298" N	75° 6' 59.404" E	
	4	31° 19' 5.054" N	75° 6' 58.968" E	
	5	31° 19' 11.303" N	75° 6' 58.799" E	
	6	31° 19' 12.680" N	75° 7' 5.199" E	



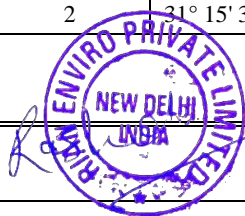
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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	7	31° 19' 9.846" N	75° 7' 5.236" E	
	8	31° 19' 4.256" N	75° 7' 4.673" E	
	9	31° 19' 1.914" N	75° 7' 3.882" E	
PO_KT_SL_BS_14 (XIX)	1	31° 18' 47.265" N	75° 6' 57.474" E	SULTANPUR LODHI
	2	31° 18' 51.891" N	75° 6' 57.335" E	
	3	31° 18' 54.957" N	75° 6' 58.514" E	
	4	31° 18' 55.842" N	75° 6' 58.953" E	
	5	31° 18' 55.657" N	75° 7' 0.037" E	
PO_KT_SL_BS_14 (XX)	1	31° 18' 39.417" N	75° 6' 52.738" E	SULTANPUR LODHI
	2	31° 18' 38.658" N	75° 6' 52.071" E	
	3	31° 18' 40.455" N	75° 6' 52.330" E	
	4	31° 18' 44.587" N	75° 6' 54.195" E	
PO_KT_SL_BS_15	1	31° 16' 59.731" N	75° 6' 48.016" E	SULTANPUR LODHI
	2	31° 17' 1.680" N	75° 6' 50.035" E	
	3	31° 17' 5.151" N	75° 6' 50.743" E	
	4	31° 17' 7.882" N	75° 6' 51.974" E	
	5	31° 17' 11.056" N	75° 6' 55.025" E	
	6	31° 17' 12.902" N	75° 6' 57.981" E	
	7	31° 17' 12.970" N	75° 7' 0.361" E	
	8	31° 17' 4.714" N	75° 6' 59.425" E	
	9	31° 17' 2.579" N	75° 6' 58.702" E	
	10	31° 17' 0.067" N	75° 6' 54.942" E	
PO_KT_SL_BS_16	1	31° 17' 0.037" N	75° 6' 44.693" E	SULTANPUR LODHI
	2	31° 17' 1.458" N	75° 6' 44.912" E	
	3	31° 17' 5.537" N	75° 6' 43.753" E	
	4	31° 17' 11.546" N	75° 6' 47.952" E	
	5	31° 17' 12.573" N	75° 6' 53.639" E	
	6	31° 17' 8.778" N	75° 6' 51.368" E	
	7	31° 17' 0.986" N	75° 6' 48.204" E	
PO_KT_SL_BS_16 A	1	31° 16' 56.305" N	75° 6' 36.572" E	SULTANPUR LODHI
	2	31° 17' 1.496" N	75° 6' 36.927" E	
	3	31° 17' 11.920" N	75° 6' 44.898" E	
	4	31° 17' 11.543" N	75° 6' 46.473" E	
	5	31° 17' 7.537" N	75° 6' 43.157" E	
	6	31° 17' 4.517" N	75° 6' 43.166" E	
	7	31° 17' 2.967" N	75° 6' 43.878" E	
	8	31° 17' 0.874" N	75° 6' 44.304" E	
	9	31° 16' 59.777" N	75° 6' 44.059" E	
PO_KT_SL_BS_17	1	31° 16' 39.500" N	75° 6' 24.380" E	SULTANPUR LODHI
	2	31° 16' 38.068" N	75° 6' 23.571" E	



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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	3	31° 16' 39.662" N	75° 6' 23.346" E	
	4	31° 16' 42.841" N	75° 6' 24.450" E	
	5	31° 16' 43.371" N	75° 6' 24.894" E	
	6	31° 16' 41.147" N	75° 6' 24.482" E	
PO_KT_SL_BS_18	1	31° 15' 59.305" N	75° 7' 23.862" E	SULTANPUR LODHI
	2	31° 15' 59.260" N	75° 7' 23.090" E	
	3	31° 16' 5.031" N	75° 7' 22.523" E	
	4	31° 16' 6.469" N	75° 7' 21.196" E	
	5	31° 16' 11.447" N	75° 7' 12.356" E	
	6	31° 16' 17.991" N	75° 7' 9.617" E	
	7	31° 16' 14.605" N	75° 7' 16.768" E	
	8	31° 16' 11.265" N	75° 7' 22.748" E	
	9	31° 16' 8.526" N	75° 7' 24.188" E	
	10	31° 16' 4.968" N	75° 7' 24.653" E	
PO_KT_SL_BS_19	1	31° 14' 42.469" N	75° 6' 33.228" E	SULTANPUR LODHI
	2	31° 14' 41.178" N	75° 6' 31.897" E	
	3	31° 14' 40.121" N	75° 6' 30.259" E	
	4	31° 14' 38.653" N	75° 6' 28.968" E	
	5	31° 14' 37.039" N	75° 6' 27.645" E	
	6	31° 14' 31.756" N	75° 6' 22.152" E	
	7	31° 14' 30.652" N	75° 6' 16.107" E	
	8	31° 14' 31.158" N	75° 6' 10.067" E	
	9	31° 14' 30.332" N	75° 6' 5.862" E	
	10	31° 14' 30.214" N	75° 5' 59.294" E	
	11	31° 14' 30.221" N	75° 5' 59.307" E	
	12	31° 14' 36.509" N	75° 6' 7.991" E	
	13	31° 14' 37.150" N	75° 6' 12.143" E	
	14	31° 14' 41.159" N	75° 6' 23.876" E	
	15	31° 14' 44.550" N	75° 6' 31.579" E	
	16	31° 14' 44.393" N	75° 6' 33.091" E	
	17	31° 14' 43.475" N	75° 6' 33.706" E	
PO_KT_SL_BS_20	1	31° 14' 16.219" N	75° 5' 43.668" E	SULTANPUR LODHI
	2	31° 14' 15.518" N	75° 5' 41.436" E	
	3	31° 14' 15.509" N	75° 5' 38.809" E	
	4	31° 14' 16.164" N	75° 5' 37.549" E	
	5	31° 14' 18.193" N	75° 5' 41.489" E	
	6	31° 14' 19.690" N	75° 5' 44.627" E	
	7	31° 14' 19.488" N	75° 5' 45.235" E	
PO_KT_SL_BS_21	1	31° 15' 34.504" N	75° 5' 28.264" E	SULTANPUR LODHI
	2	31° 15' 38.341" N	75° 5' 28.314" E	



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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK		
	3	31° 15' 39.837" N	75° 5' 28.592" E			
	4	31° 15' 44.486" N	75° 5' 28.713" E			
	5	31° 15' 45.364" N	75° 5' 28.973" E			
	6	31° 15' 46.224" N	75° 5' 28.758" E			
	7	31° 15' 47.056" N	75° 5' 28.779" E			
	8	31° 15' 50.243" N	75° 5' 28.415" E			
	9	31° 15' 50.697" N	75° 5' 28.873" E			
	10	31° 15' 49.603" N	75° 5' 29.603" E			
	11	31° 15' 45.868" N	75° 5' 30.474" E			
	12	31° 15' 38.644" N	75° 5' 29.722" E			
	13	31° 15' 36.841" N	75° 5' 30.029" E			
	PO_KT_SL_BS_22	1	31° 15' 29.661" N		75° 5' 17.236" E	SULTANPUR LODHI
		2	31° 15' 32.311" N		75° 5' 24.023" E	
3		31° 15' 34.510" N	75° 5' 26.764" E			
4		31° 15' 32.830" N	75° 5' 26.287" E			
5		31° 15' 30.110" N	75° 5' 20.260" E			
PO_KT_SL_BS_22 (I)	1	31° 14' 30.783" N	75° 4' 44.788" E	SULTANPUR LODHI		
	2	31° 14' 32.943" N	75° 4' 46.269" E			
	3	31° 14' 34.836" N	75° 4' 49.496" E			
	4	31° 14' 34.938" N	75° 4' 51.132" E			
	5	31° 14' 34.675" N	75° 4' 52.879" E			
	6	31° 14' 34.414" N	75° 4' 52.144" E			
	7	31° 14' 33.659" N	75° 4' 51.399" E			
	8	31° 14' 33.131" N	75° 4' 50.502" E			
	9	31° 14' 32.392" N	75° 4' 47.481" E			
PO_KT_SL_BS_22 (II)	1	31° 14' 26.058" N	75° 4' 44.393" E	SULTANPUR LODHI		
	2	31° 14' 29.051" N	75° 4' 44.210" E			
	3	31° 14' 30.194" N	75° 4' 44.591" E			
	4	31° 14' 31.246" N	75° 4' 45.936" E			
	5	31° 14' 31.889" N	75° 4' 47.349" E			
	6	31° 14' 32.541" N	75° 4' 49.978" E			
	7	31° 14' 32.354" N	75° 4' 50.345" E			
	8	31° 14' 31.890" N	75° 4' 50.237" E			
	9	31° 14' 31.133" N	75° 4' 49.665" E			
	10	31° 14' 30.249" N	75° 4' 48.853" E			
	11	31° 14' 28.533" N	75° 4' 47.409" E			
	12	31° 14' 27.330" N	75° 4' 45.404" E			
PO_KT_SL_BS_22 (III)	1	31° 14' 24.766" N	75° 4' 46.531" E	SULTANPUR LODHI		
	2	31° 14' 23.334" N	75° 4' 44.819" E			
	3	31° 14' 23.970" N	75° 4' 44.588" E			



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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	4	31° 14' 25.535" N	75° 4' 44.833" E	
	5	31° 14' 26.890" N	75° 4' 46.049" E	
	6	31° 14' 26.967" N	75° 4' 46.649" E	
	7	31° 14' 28.808" N	75° 4' 49.333" E	
	8	31° 14' 28.699" N	75° 4' 49.626" E	
	9	31° 14' 27.464" N	75° 4' 49.552" E	
PO_KT_SL_BS_22 (IV)	1	31° 14' 21.339" N	75° 4' 42.898" E	SULTANPUR LODHI
	2	31° 14' 23.251" N	75° 4' 43.170" E	
	3	31° 14' 25.210" N	75° 4' 44.156" E	
	4	31° 14' 25.050" N	75° 4' 44.250" E	
	5	31° 14' 22.778" N	75° 4' 44.026" E	
PO_KT_SL_BS_22 (V)	1	31° 13' 33.953" N	75° 4' 37.075" E	SULTANPUR LODHI
	2	31° 13' 33.011" N	75° 4' 32.608" E	
	3	31° 13' 34.286" N	75° 4' 33.561" E	
	4	31° 13' 34.539" N	75° 4' 33.934" E	
	5	31° 13' 36.122" N	75° 4' 34.798" E	
	6	31° 13' 39.304" N	75° 4' 38.576" E	
	7	31° 13' 41.130" N	75° 4' 42.367" E	
	8	31° 13' 44.936" N	75° 4' 47.929" E	
	9	31° 13' 44.736" N	75° 4' 48.557" E	
	10	31° 13' 39.741" N	75° 4' 46.830" E	
	11	31° 13' 36.638" N	75° 4' 43.135" E	
	12	31° 13' 34.775" N	75° 4' 39.707" E	
PO_KT_SL_BS_22 (VI)	1	31° 11' 19.208" N	75° 2' 58.610" E	SULTANPUR LODHI
	2	31° 11' 19.809" N	75° 2' 58.617" E	
	3	31° 11' 21.328" N	75° 2' 59.266" E	
	4	31° 11' 23.380" N	75° 3' 0.686" E	
	5	31° 11' 23.726" N	75° 3' 1.562" E	
	6	31° 11' 23.088" N	75° 3' 1.559" E	
	7	31° 11' 21.153" N	75° 3' 0.588" E	
PO_KT_SL_BS_22 (VII)	1	31° 11' 16.309" N	75° 2' 56.021" E	SULTANPUR LODHI
	2	31° 11' 18.644" N	75° 2' 56.683" E	
	3	31° 11' 19.506" N	75° 2' 57.268" E	
	4	31° 11' 19.254" N	75° 2' 57.147" E	
	5	31° 11' 17.903" N	75° 2' 57.004" E	
PO_KT_SL_BS_22 (VIII)	1	31° 10' 22.442" N	75° 2' 0.464" E	SULTANPUR LODHI
	2	31° 10' 23.081" N	75° 2' 1.262" E	
	3	31° 10' 23.326" N	75° 2' 2.365" E	
	4	31° 10' 23.994" N	75° 2' 3.544" E	
	5	31° 10' 24.272" N	75° 2' 5.554" E	



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SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	ADMINISTRATIVE BLOCK
	6	31° 10' 23.889" N	75° 2' 6.025" E	
	7	31° 10' 23.494" N	75° 2' 5.396" E	
	8	31° 10' 22.841" N	75° 2' 3.237" E	
PO_KT_SL_BS_22 (IX)	1	31° 10' 25.964" N	75° 1' 52.133" E	SULTANPUR LODHI
	2	31° 10' 25.350" N	75° 1' 53.975" E	
	3	31° 10' 24.578" N	75° 1' 54.913" E	
	4	31° 10' 23.553" N	75° 1' 55.332" E	
	5	31° 10' 23.417" N	75° 1' 54.886" E	
	6	31° 10' 23.551" N	75° 1' 53.636" E	
	7	31° 10' 24.716" N	75° 1' 51.875" E	
	8	31° 10' 26.320" N	75° 1' 49.210" E	
	9	31° 10' 27.143" N	75° 1' 48.680" E	
PO_KT_SL_BS_23	1	31° 10' 35.939" N	75° 0' 48.546" E	SULTANPUR LODHI
	2	31° 10' 36.529" N	75° 0' 46.559" E	
	3	31° 10' 36.782" N	75° 0' 43.202" E	
	4	31° 10' 37.279" N	75° 0' 44.164" E	
	5	31° 10' 38.642" N	75° 0' 45.804" E	
	6	31° 10' 40.928" N	75° 0' 53.113" E	
	7	31° 10' 40.695" N	75° 0' 59.114" E	
	8	31° 10' 40.198" N	75° 0' 58.950" E	
	9	31° 10' 39.099" N	75° 0' 57.547" E	



Annexure-C
**(The structure of the Sub-Divisional Committee
Constituted for the preparation of the District Survey
Report for Sand minerals of District Kapurthala)**





ਦਫ਼ਤਰ : ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ, ਕਪੂਰਥਲਾ ।

Tele No. 01822-233777-O, 233776-R, 233393-F

E-mail : dckapurthala@gmail.com

OFFICER ORDER

1.0 In view of the directions issued by the Government of Punjab, Department of Mines & Geology vide letter no. PSWR/ E321792 /414 dated 05.05.2022, following Sub Division Level Committees are hereby constituted for the preparation of District Survey Report (DSR) for district Kapurthala -

i. For Kapurthala Sub-Division

- (a) Sub-Divisional Magistrate Kapurthala -Chairperson
- (b) Environment Engineer/XEN PPCB, Jalandhar - Member
- (c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) -Member
- (d) Executive Engineer, Const. Div. No. 1 , PWD (B&R) , Kapurthala -Member
- (e) Executive Engineer, Jalandhar Drainage Division Jalandhar - Member
- (f) Divisional Forest Officer, Phillaur Jalandhar -Member
- (g) Chief Agriculture Officer, Kapurthala -Member
- (h) All Block Development and Panchayat Officer, Kapurthala -Member
- (i) District Mining Officer, Kapurthala -Member Secretary

ii. For Sultanpur Lodhi Sub-Division

- (a) Sub-Divisional Magistrate Sultanpur Lodhi-Chairperson
- (b) Environment Engineer/XEN PPCB, Jalandhar - Member
- (c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) -Member
- (d) Executive Engineer, Const. Div. No. 2 , PWD (B&R) , Kapurthala -Member
- (e) Executive Engineer, Jalandhar Drainage Division Jalandhar - Member
- (f) Divisional Forest Officer, Phillaur Jalandhar -Member
- (g) Chief Agriculture Officer, Kapurthala -Member
- (h) All Block Development and Panchayat Officer, Sultanpur Lodhi -Member
- (i) District Mining Officer, Kapurthala -Member Secretary

iii. For Bholath Sub-Division

- (a) Sub-Divisional Magistrate Bholath-Chairperson
- (b) Environment Engineer/XEN PPCB, Jalandhar - Member
- (c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) -Member
- (d) Executive Engineer, Const. Div. No. 1 , PWD (B&R) , Kapurthala -Member
- (e) Executive Engineer, Jalandhar Drainage Division Jalandhar -Member



- (f) Divisional Forest Officer, Phillaur Jalandhar -Member
- (g) Chief Agriculture Officer, Kapurthala -Member
- (h) All Block Development and Panchayat Officer, Bholath -Member
- (i) District Mining Officer, Kapurthala -Member Secretary

iv. **For Phagwara Sub-Division**

- (a) Sub-Divisional Magistrate Phagwara -Chairperson
- (b) Environment Engineer/XEN PPCB, Jalandhar - Member
- (c) Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) -Member
- (d) Executive Engineer, Const. Div. No. 2 , PWD (B&R) , Kapurthala -Member
- (e) Executive Engineer, Phagwara Drainage Division, Phagwara - Member
- (f) Divisional Forest Officer, Phillaur Jalandhar -Member
- (g) Chief Agriculture Officer, Kapurthala -Member
- (h) All Block Development and Panchayat Officer, Phagwara -Member
- (i) District Mining Officer, Kapurthala -Member Secretary

2.0 The Sub Division Level Committees shall get the DSR prepared with the help of consultant accredited by NABET (National Accreditation Board of Education & Training).

3.0 The Committees shall prepare and submit the DSR in accordance with the sustainable Sand Mining Management Guidelines, 2016, Enforcement & Monitoring Guidelines for Sand Mining, 2020 and as per various directions passed by Hon'ble Supreme Court and National Green Tribunal from time to time.

Deputy Commissioner
Kapurthala

Endst No. 3528-32 /MA

Date: 08/05/2022

Copy of the above is forwarded to the following for information and further necessary action-

1. Principal Secretary, Mines & Geology.
2. Director, Mines & Geology
3. All concerned SDMs cum Chairman of the Committees.
4. All concerned officers/members of the committees.

Deputy Commissioner
Kapurthala



Annexure-D
(Photographs of the site survey)





Latitude: 31.374241
Longitude: 75.166038
Altitude: 169.8±8 m
Accuracy: 4.0 m
Time: 06-08-2022 13:12
Note: mand goindpur

Powered by NoteCam



Latitude: 31.510273
Longitude: 75.304653
Elevation: 238.58±14 m
Accuracy: 7.7 m
Time: 06-08-2022 11:20
Note: rampur

162 Powered by NoteCam





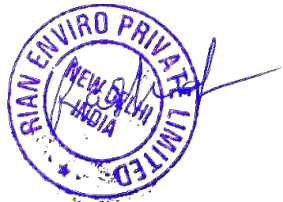
Latitude: 31.374226
Longitude: 75.166058
Elevation: 216.61±7 m
Accuracy: 9.2 m
Time: 06-08-2022 13:11
Note: mand goindpur

Powered by NovaCam



Latitude: 31.509816
Longitude: 75.306379
Elevation: 234.3±4 m
Accuracy: 3.8 m
Time: 06-08-2022 11:40
Note: rampur

Powered by NovaCam





Annexure-E
(Sub- Divisional Committee visit report)





Office : Deputy Commissioner Kapurthala
Tele No. 01822-233777-O, 233776-R, 233393-F
E-mail : dc.kpr@punjab.gov.in

To,

✓ The Director,
Mines & Geology Department of Water Resources,
Punjab, Chandigarh.

No...3518-20 / SAC Report Date...16/12/2022

Subject: - Submission of Site Appraisal committee reports For the DSR of District Kapurthala.

Reference :- Hon'ble Principle Secretary , Deptt. of Mines and Geology, Govt. of Punjab Memo No. 2102 Dated 06-12-2022.

With reference to above cited subject, it is intimated that Site visit of sub Division Bholath, Kapurthala and Sultanpur Lodhi completed on Dated 12-12-2022, 13-12-2022 and 14-12-2022 respectively. The Detailed SAC reports of Potntial Sand Mining Sites of River Beas and Agriculture Sites in District kapurthala are enclosed.

it is further intimated that reports/Certificate of The Divisional Forest officer Territorial & Wildlife , Jalandhar at Phillaur are also annexed with this letter for information and Further necessary action please.

DA :-

1. 3 no. Reports of Sub Divisional SAC.
2. DFO (Forest and Wildlife) Jalandhar at Phillaur Certificate Dated 15-12-2022
3. DFO (Territorial) Jalandhar at Phillaur Letter Dated 10-10-2022.

Deputy Commissioner
Kapurthala.

C.C.:- 1. Executive Engineer-cum-District Mining Officer, Kapurthala.

2. **Rian Enviro Private Limited. 133, Ansal Chamber-II, 6 Bhikaji Cama Place, New Delhi.**



ਸੇਵਾ ਵਿਖੇ

ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ
ਕਪੂਰਥਲਾ।

ਨੰਬਰ: 1 | Spl | Bhulath

ਮਿਤੀ: 16/12/2022

ਵਿਸ਼ਾ: Post ਮੈਨਸੂਨ ਸਰਵੇ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਸਾਈਟ ਅਪ੍ਰੈਜਲ ਦੀ ਰਿਪੋਰਟ ਸੰਬੰਧੀ।


ਹਵਾਲਾ: ਆਪ ਜੀ ਦੇ ਦਫਤਰ ਦਾ ਪੱਤਰ ਨੰਬਰ Spl/01/DSR ਮਿਤੀ 08/12/2022

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਅਤੇ ਹਵਾਲੇ ਅਧੀਨ ਪੱਤਰ ਦੇ ਸੰਬੰਧ ਵਿਚ ਆਪ ਜੀ ਦੇ ਹੁਕਮਾਂ ਦੀ ਪਾਲਣਾ ਕਰਦੇ ਹੋਏ Post ਮੈਨਸੂਨ ਡਿਸਟ੍ਰਿਕਟ ਸਰਵੇ ਰਿਪੋਰਟ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਵਿਜ਼ਿਟ ਮਿਤੀ 12/12/2022 ਨੂੰ ਕੀਤੀ ਗਈ ਸੀ ਅਤੇ ਸਾਈਟ ਅਪ੍ਰੈਜਲ ਕਮੇਟੀ ਭੁਲੱਥ ਦੀ ਰਿਪੋਰਟ ਨਾਲ ਨੱਥੀ ਕਰਕੇ ਆਪਜੀ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਹਿੱਤ ਭੇਜੀ ਜਾਂਦੀ ਹੈ ਜੀ।

ਨੋਟ:- ਮੰਡਲ ਜੰਗਲਾਤ ਅਫਸਰ, ਵਾਈਲਡਲਾਈਫ ਮੰਡਲ, ਫਿਲੋਰ ਵਲੋਂ ਸਰਟੀਫਿਕੇਟ ਜਾਰੀ ਕੀਤਾ ਹੈ। (ਨੱਥੀ ਹੈ) ਜਿਸ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਲਈ ਵਾਚ ਲਿਆ ਜਾਵੇ ਜੀ।

ਇਹ ਆਪ ਜੀ ਦੀ ਸੂਚਨਾ ਹਿੱਤ ਹੈ ਜੀ।

ਨੱਥੀ: ਉਪਰੋਕਤ ਅਨੁਸਾਰ


ਉਪ ਮੰਡਲ ਮੈਜਿਸਟ੍ਰੇਟ
ਭੁਲੱਥ।

ਸੀ.ਸੀ: - ਕਾਰਜਕਾਰੀ ਇੰਜੀਨੀਅਰ-ਕਮ-ਜ਼ਿਲ੍ਹਾ ਮਾਈਨਿੰਗ ਅਫਸਰ, ਕਪੂਰਥਲਾ ਨੂੰ ਸੂਚਨਾ ਹਿੱਤ ਹੈ।



A REPORT OF SUB-DIVISION LEVEL COMMITTEE BHOLATH SITE VISIT OF POTENTIAL SAND MINING SITES IN TEHSIL BHOLATH DISTRICT KAPURTHALA ON DATED: 12-12-2022 REGARDING

In connection with the above, it is submitted that the Sub-Division Level Committee Bholath, constituted by the Hon'ble Deputy Commissioner Kapurthala vide his office order Ref No. 01/spl/DSR dated 08-12-2022, conducted a joint site visit on Dated 12-12-2022 for the purpose of inclusion in the District Survey Report of Kapurthala of sand mining sites shown below :

River Bed Sand Mining Sites

Sr. No.	Site Name	Tehsil	Area (Sq. m.)	Recommended or Not
1	PO_KT_KT_BS_1A	-	45280.6	Not Recommended
2	PO_KT_KT_BS_1B	-	90426.5	Not Recommended
3	Mand Raipur Araiyan	Bholath	40700	Recommended Except Forest Deptt.

The inspection report along with observation of respective Members of Sub-Division Level Committee Bholath in this regard are shown below as :-

1. Tehsildar Bholath

Kml Site No. PO_KT_KT_BS_1A and PO_KT_KT_BS_1B do not falls under the jurisdiction of district Kapurthala hence these are falling under District Amritsar so these sites should be deleted.

2. Block Development and Panchayat Officer

For Raipur Araiyan mining site it has been observed that this land belongs to private ownership and Gram Panchayat of above mentioned village do not have any objection but Land owners of adjoining land of this site raised objections and there is a passage problem too.

3. Divisional Forest Officer, Department of Forests and Wildlife Prevention, Jalandhar at Phillaur Punjab

During the site inspection representative of the forest and wildlife department objected to proposed any mining site in river bed of River Beas due to "Beas River Conservation Reserve" and declared as Ramsar Site, Notification of Department of Forest And Wildlife Preservation Government Of Punjab Notification No. 34/13/2017-FT-5/1052756/1 Chandigarh dated 29-08-2017.

The Department of Forest and Wildlife objected to any type of mining activity in river Bed of River Beas

4. Environmental Engineer, Punjab Pollution Control Board

The proposed mining site shall obtain the prior environmental clearance from SEIAA as per the EIA notification 2006 and subsequent amendments and shall obtain the consent



to establish/consent to operate from the Punjab Pollution Control Board under the water act 1974 and air act 1981 before its establishment and commissioning respectively.

All the above said quarries are more than 50 meters from any public place such as public roads and Buildings or Residential Areas and more than 10 meters from village roads, 7.5 meters from nearby Private/government Land. Sand is available in all the above-mentioned site;

5. **Executive Engineer, Building & Roads, Punjab Public Works Department**

It has been observed that the above said sand mine sr. no. 3 is more than 1.0 KM from any Bridge Or National Highway and more than 500 meters upstream/downstream of any High Level Bridge and 250 meters upstream/downstream of other bridges. Therefore above mentioned proposed sand mining site fulfill all the instructions of PWD department. So, there is no objection in this regard.

6. **Executive Engineer, Irrigation Branch, Department of Water Resources Punjab**


It has been observed that the above said potential sand site no. 3 is more than 50 meters distance from any Reservoir, Tank, Canal etc. There is no objection in this regard.

7. **Executive Engineer, Drainage-cum-Mining, Department of Water Resources Punjab**

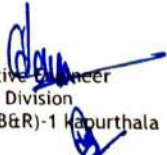
It has been observed that for the above said sand quarry Sr. No. 3, there is no Flood Protection Embankment within 100 meters (inside/outside) of the above said proposed sand mining sites and no Flood protection works exists near this site. There is no objection in this regard.


8. **Chief Agriculture Officer, Department of Agriculture, Punjab**

There is no objection on above mining proposed site shown above.



Divisional Forest Officer
Wildlife Jalandhar at
Phillaur


Environmental Engineer
PPCB
Jalandhar



Executive Engineer
Const. Division
PWD (B&R)-1 Kapurthala

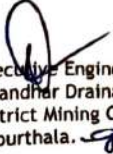

Executive Engineer
Bist Doab Division
Jalandhar(Irrigation)


Divisional Forest Officer
(Territorial) Phillaur


Chief Agriculture Officer
Kapurthala


Tehsildar
Bholath


Block Development
& Panchayat Officer
Nadala


Executive Engineer
Jalandhar Drainage-cum-
District Mining Officer
Kapurthala.


Sub Divisional Magistrate
Bholath



**OFFICE OF BLOCK DEVELOPMENT AND PANCHAYAT OFFICER,
DHILWAN**

CERTIFICATE

TO WHOM IT MAY CONCERN

It is certified that this office has no objection to approve any sand mining site in vill. Chakoki in River Beas but the Gram Panchayat Village Chakoki not agreed to give their consent for any sand mining site in Panchayti land. I tried hard to convince Sarpanch and Gram Panchayat but they opposed any mining site in Chakoki Village and they also refused to Sign the resolution for Mining site.


(Amarjit Singh)

BLOCK DEVELOPMENT AND
PANCHAYAT OFFICER
DHILWAN



ਸੇਵਾ ਵਿਖੇ

ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ
ਕਪੂਰਥਲਾ।

ਨੰਬਰ: 536

ਮਿਤੀ: 15/12/2022

ਵਿਸ਼ਾ: Post ਮੈਨਸੂਨ ਸਰਵੇ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਸਾਈਟ ਅਪੈਲ ਦੀ ਰਿਪੋਰਟ ਸੰਬੰਧੀ।

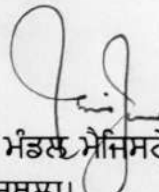
ਹਵਾਲਾ: ਆਪ ਜੀ ਦੇ ਦਫਤਰ ਦਾ ਪੱਤਰ ਨੰਬਰ Spl/02/DSR ਮਿਤੀ 08/12/2022

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਅਤੇ ਹਵਾਲੇ ਅਧੀਨ ਪੱਤਰ ਦੇ ਸੰਬੰਧ ਵਿੱਚ ਆਪ ਜੀ ਦੇ ਹੁਕਮਾਂ ਦੀ ਪਾਲਣਾ ਕਰਦੇ ਹੋਏ Post ਮੈਨਸੂਨ ਡਿਸਟ੍ਰਿਕਟ ਸਰਵੇ ਰਿਪੋਰਟ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਵਿਜ਼ਿਟ ਮਿਤੀ 13/12/2022 ਨੂੰ ਕੀਤੀ ਗਈ ਸੀ ਅਤੇ ਸਾਈਟ ਅਪੈਲ ਕਮੇਟੀ ਕਪੂਰਥਲਾ ਦੀ ਰਿਪੋਰਟ ਨਾਲ ਨੱਥੀ ਕਰਕੇ ਆਪਜੀ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਹਿੱਤ ਭੇਜੀ ਜਾਂਦੀ ਹੈ ਜੀ।

ਨੋਟ:- ਮੰਡਲ ਜੰਗਲਾਤ ਅਫਸਰ, ਵਾਈਲਡਲਾਈਫ ਮੰਡਲ, ਫਿਲੋਰ ਵਲੋਂ ਸਰਟੀਫਿਕੇਟ ਜਾਰੀ ਕੀਤਾ ਹੈ। (ਨੱਥੀ ਹੈ) ਜਿਸ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਲਈ ਵਾਚ ਲਿਆ ਜਾਵੇ ਜੀ।

ਇਹ ਆਪ ਜੀ ਦੀ ਸੂਚਨਾ ਹਿੱਤ ਹੈ ਜੀ।

ਨੱਥੀ: ਉਪਰੋਕਤ ਅਨੁਸਾਰ


ਉਪ ਮੰਡਲ ਮੈਜਿਸਟ੍ਰੇਟ
ਕਪੂਰਥਲਾ।

ਸੀ.ਸੀ: - ਕਾਰਜਕਾਰੀ ਇੰਜੀਨੀਅਰ-ਕਮ-ਜ਼ਿਲ੍ਹਾ ਮਾਈਨਿੰਗ ਅਫਸਰ, ਕਪੂਰਥਲਾ ਨੂੰ ਸੂਚਨਾ ਹਿੱਤ ਹੈ।



**A REPORT OF SUB-DIVISION LEVEL COMMITTEE KAPURTHALA SITE VISIT OF
POTENTIAL SAND MINING SITES IN TEHSIL KAPURTHALA DISTRICT
KAPURTHALA ON DATED: 13-12-2022 REGARDING**

In connection with the above, it is submitted that the Sub-Division Level Committee Kapurthala, constituted by the Hon'ble Deputy Commissioner Kapurthala vide his office order Ref No. 02/spl/DSR dated 08-12-2022, conducted a joint site visit on Dated 13-12-2022 for the purpose of inclusion in the District Survey Report of Kapurthala of sand mining sites shown below :

River Bed Sand Mining Sites

Sr. No.	Site Name	Tehsil	Area (Sq. m.)	Recommended or Not
1	PO_KT_DW_BS_01	Kapurthala	46851.34342	Not Recommended
2	PO_KT_DW_BS_02	Kapurthala	310343	Not Recommended
3	PO_KT_DW_BS_04	Kapurthala	24115.42595	Not Recommended
4	PO_KT_DW_BS_05	Kapurthala	65292.22417	Not Recommended
5	PO_KT_DW_BS_08	Kapurthala	50029.48995	Not Recommended
6	PO_KT_DW_BS_09	Kapurthala	45590.4	Recommended Except Forest Deptt.
7	PO_KT_DW_BS_14(II)	Kapurthala	9565.706492	Recommended Except Forest Deptt.
8	PO_KT_DW_BS_14(III)	Kapurthala	23251.79779	Recommended Except Forest Deptt.
9	PO_KT_DW_BS_14(IV)	Kapurthala	7522.789691	Not Recommended
10	PO_KT_DW_BS_14(V)	Kapurthala	3374.49142	Not Recommended
11	PO_KT_DW_BS_14(VI)	Kapurthala	6892.385821	Not Recommended
12	PO_KT_DW_BS_14(VII)	Kapurthala	11191.47195	Not Recommended
13	PO_KT_DW_BS_14(VIII)	Kapurthala	9115.798452	Recommended Except Forest Deptt.
14	PO_KT_DW_BS_14(X)	Kapurthala	2999.226913	Recommended Except Forest Deptt.
15	PO_KT_DW_BS_14(XI)	Kapurthala	9443.333255	Not Recommended

Agriculture Mining Sites

Sr. No.	Name of Land Owner	Village name	Had Bast No.	Khasra No.	Area (Sq. m.)	Recommended or Not
1	Surjit Singh s/o Fakir Singh vill. Khangah, Distt. kapurthala Jasbir Chand s/o joginder Singh vill Booh , distt. Kapurthala Kuldeep singh s/o Fakir Singh vill Khangah , distt. Kapurthala Ranjit kaur bansi d/o joginder Singh vill. Alaudipur , Kapurthala	Booh	81	48//4,7,14,15,16,11	23734	Not Recommended (During Demarcation of this site on dated 22/11/2022 with Revenue staff, the Land owners Refused to Give this Agriculture site for Sand Mining as well as the gram panchayat and the adjoining land owners also objected to allow the mines in this area.



The inspection report along with observation of respective Members of Sub-Division Level Committee Kapurthala in this regard are shown below as :-

1. Tehsildar Kapurthala

- Kml Site No. PO_KT_DW_BS_01 and PO_KT_DW_BS_02 situated in the villiage Chakoki and reported by the revenue department that most of the land belongs to Gram panchayat/Punjab government.
- PO_KT_DW_BS_04 and PO_KT_DW_BS_05 situated in the Mand Butala in between River flow and material not accessible.
- PO_KT_DW_BS_08 situated in vill. Bhaini in between River flow and material not accessible
- PO_KT_DW_BS_09 situated in Mand Dhilwan and Land belongs to Dera Beas and needs their consent before any mining operation.
- PO_KT_DW_BS_14(II), PO_KT_DW_BS_14(III) situated in the vill. Kamewal.
- PO_KT_DW_BS_14(IV), PO_KT_DW_BS_14(V), situated in vill, Bhaguana (Tarn Taran Side) in between River flow and material not accessible.
- PO_KT_DW_BS_14(VI) situated in vill, Bhaguana in between River flow and material not accessible ,
- PO_KT_DW_BS_14(VII), Situated in vill. Sabk Desal and no sand Bar is Available on the spot.
- Kml Site No. PO_KT_DW_BS_14(VIII) situated in vill, Sabk Desal and it is accessible in low River Discharge.
- Kml Site No. PO_KT_DW_BS_14(X) Situated in vill. Sabk Desal (Tarn Taran side) it can be operational in low River Discharge,
- Kml Site No. PO_KT_DW_BS_14(XI) situated in vill, Sabk Desal in between River flow and material not accessible.

All these sites need Demarcation through total station or DGPS as these Sites Falls within the River so that proper ownership can be found before any mining operation.

2. Block Development and Panchayat Officer

Kml Site No. PO_KT_DW_BS_01 and PO_KT_DW_BS_02 situated in the villiage Chakoki and most of the land belongs to Gram panchayat/Punjab government and BDPO reported that he has no Objection in these Sites and resolution From Gram panchayat vill. Chakoki will be taken Shortly.

All Remaining sites need Demarcation through total station or DGPS as these Sites Falls within the River so that proper ownership can be found before any mining operation.

3. Divisional Forest Officer, Department of Forests and Wildlife Prevention, Jalandhar at Phillaur Punjab

- I. During the site inspection representative of the forest and wildlife department objected to proposed any mining site in River bed of River Beas due to "**Beas River Conservation Reserve**" and declared as **Ramsar Site**, Notification of Department Of Forest And Wildlife Preservation Government Of Punjab Notification No. 34/13/2017-FT-5/1052756/1 Chandigarh dated 29-08-2017

- II. **Divisional Forest officer (territorial) Phillaur:-** During the site inspection The Representative of the Forest Deptt. produced a notification no. 34/12/2019-FT5/1499748/1 Chandigarh Dated 11-06-2019 and objected to any type of mining in Vill. Mand Chakoki and Vill. Booh of Tehsil Kapurthala due to dispute of Land Ownership with Forest Department. The objection letter vide letter no. JFD/T.P/7152 Dated 10.10.2022 attached Herewith.

The Department of Forest and Wildlife objected to any type of mining activity in river Bed of River Beas



4. **Environmental Engineer, Punjab Pollution Control Board**

The proposed mining sites shall obtain the prior environmental clearance from SEIAA as per the EIA notification 2006 and subsequent amendments and shall obtain the consent to establish/consent to operate from the Punjab Pollution Control Board under the water act 1974 and air act 1981 before its establishment and commissioning respectively.

All the above said quarries are more than 50 meters from any public place such as public roads and Buildings or Residential Areas and more than 10 meters from village roads, 7.5 meters from nearby Private/government Land. Sand is available in all the above-mentioned site;

5. **Executive Engineer, Building & Roads, Punjab Public Works Department**

It has been observed that the above said sand sites are more than 1.0 KM from any Bridge Or National Highway and more than 500 meters upstream/downstream of any High Level Bridge and 250 meters upstream/downstream of other bridges. Therefore above mentioned proposed sand mining site fulfill all the instructions of PWD department. So, there is no objection in this regard.

6. **Executive Engineer, Irrigation Branch, Department of Water Resources Punjab**

It has been observed that the above said potential sand sites are more than 50 meters distance from any Reservoir, Tank, Canal etc. There is no objection in this regard.


7. **Executive Engineer, Drainage-cum-Mining, Department of Water Resources Punjab**

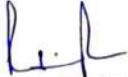
It has been observed that for the above said sand quarries, PO_KT_DW_BS_14(VI) situated in vill, Bhaguana in between River flow and material not accessible and flood protection works also near this site. PO_KT_DW_BS_14(VII), Situated in vill. Sabk Desal and no sand Bar is Available on the spot also near flood protection works Near tarn taran side. For Remaining Sites there is no Flood Protection Embankment within 100 meters (inside/outside) and no Flood protection works exists near this site.


There is no objection in this regard.

8. **Chief Agriculture Officer, Department of Agriculture, Punjab**

There is no objection on above mining proposed sites shown above.


Divisional Forest Officer
Wildlife Jalandhar at
Phillaur



Environmental Engineer
PPCB, Jalandhar
Jalandhar



Executive Engineer,
Const. Division
PWD (B&R)-1 kapurthala

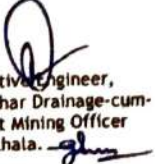

Executive Engineer
Bist Doab Div
Jalandhar(Irrigation)


Divisional Forest Officer
(Territorial) Phillaur


Chief Agriculture Officer
Kapurthala


Tehsildar
Kapurthala


Block Development
& Panchayat Officer
Dhilwan


Executive Engineer,
Jalandhar Drainage-cum-
District Mining Officer
Kapurthala.


Sub Divisional Magistrate
Kapurthala.



ਸੇਵਾ ਵਿਖੇ

ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ
ਕਪੂਰਥਲਾ।

ਨੰਬਰ: 5083/Steno

ਮਿਤੀ: 15/12/22

ਵਿਸ਼ਾ: Post ਮੈਨਸੂਨ ਸਰਵੇ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਸਾਈਟ ਅਪ੍ਰੈਜਲ ਦੀ ਰਿਪੋਰਟ ਸੰਬੰਧੀ।

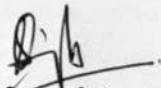
ਹਵਾਲਾ: ਆਪ ਜੀ ਦੇ ਦਫਤਰ ਦਾ ਪੱਤਰ ਨੰਬਰ Spl/03/DSR ਮਿਤੀ 08/12/2022

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਅਤੇ ਹਵਾਲੇ ਅਧੀਨ ਪੱਤਰ ਦੇ ਸੰਬੰਧ ਵਿਚ ਆਪ ਜੀ ਦੇ ਹੁਕਮਾਂ ਦੀ ਪਾਲਣਾ ਕਰਦੇ ਹੋਏ Post ਮੈਨਸੂਨ ਡਿਸਟ੍ਰਿਕਟ ਸਰਵੇ ਰਿਪੋਰਟ ਵਿੱਚ ਦਰਸਾਈਆਂ Potential Mining Sites ਦੀ ਵਿਜ਼ਿਟ ਮਿਤੀ 14/12/2022 ਨੂੰ ਕੀਤੀ ਗਈ ਸੀ ਅਤੇ ਸਾਈਟ ਅਪ੍ਰੈਜਲ ਕਮੇਟੀ ਸੁਲਤਾਨਪੁਰ ਲੋਧੀ ਦੀ ਰਿਪੋਰਟ ਨਾਲ ਨੱਥੀ ਕਰਕੇ ਆਪਜੀ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਹਿੱਤ ਭੇਜੀ ਜਾਂਦੀ ਹੈ ਜੀ।

ਨੋਟ:- ਮੰਡਲ ਜੰਗਲਾਤ ਅਫਸਰ, ਵਾਈਲਡਲਾਈਫ ਮੰਡਲ, ਫਿਲੌਰ ਵਲੋਂ ਸਰਟੀਫਿਕੇਟ ਜਾਰੀ ਕੀਤਾ ਹੈ। (ਨੱਥੀ ਹੈ) ਜਿਸ ਨੂੰ ਅਗਲੇਰੀ ਕਾਰਵਾਈ ਲਈ ਵਾਚ ਲਿਆ ਜਾਵੇ ਜੀ।

ਇਹ ਆਪ ਜੀ ਦੀ ਸੂਚਨਾ ਹਿੱਤ ਹੈ ਜੀ।

ਨੱਥੀ: ਉਪਰੋਕਤ ਅਨੁਸਾਰ


ਉਪ ਮੰਡਲ ਮੈਜਿਸਟ੍ਰੇਟ
ਸੁਲਤਾਨਪੁਰ ਲੋਧੀ।

ਸੀ.ਸੀ: - ਕਾਰਜਕਾਰੀ ਇੰਜੀਨੀਅਰ-ਕਮ-ਜ਼ਿਲ੍ਹਾ ਮਾਈਨਿੰਗ ਅਫਸਰ, ਕਪੂਰਥਲਾ ਨੂੰ ਸੂਚਨਾ ਹਿੱਤ ਹੈ।



**A REPORT OF SUB-DIVISION LEVEL COMMITTEE SULTANPUR LODHI SITE:
VISIT OF POTENTIAL SAND MINING SITES IN TEHSIL SULTANPUR LODHI
DISTRICT KAPURTHALA ON DATED: 14-12-2022 REGARDING**

In connection with the above, it is submitted that the Sub-Division Level Committee Sultanpur Lodhi, constituted by the Hon'ble Deputy Commissioner Kapurthala vide his office order Ref No. 03/spl/DSR dated 08-12-2022, conducted a joint site visit on Dated 14-12-2022 for the purpose of inclusion in the District Survey Report of Kapurthala of sand mining sites shown below :

River Bed Sand Mining Sites

Sr. No.	Site Name	Tehsil	Area (Sq. m.)	Recommended or Not
1	PO_KT_SL_BS_14(XIII)	Sultanpur Lodhi	13652.66831	Recommended Except Forest Deptt.
2	PO_KT_SL_BS_14(XV)	Sultanpur Lodhi	1888.444134	Not Recommended
3	PO_KT_SL_BS_14(XVI)	Sultanpur Lodhi	57086.72188	Not Recommended
4	PO_KT_SL_BS_14(XVII)	Sultanpur Lodhi	27108.34303	Not Recommended
5	PO_KT_SL_BS_14(XVIII)	Sultanpur Lodhi	57262.8087	Recommended Except Forest Deptt.
6	PO_KT_SL_BS_14(XIX)	Sultanpur Lodhi	8809.340993	Recommended Except Forest Deptt.
7	PO_KT_SL_BS_14(XX)	Sultanpur Lodhi	3586.534541	Recommended Except Forest Deptt.
8	PO_KT_SL_BS_15	Sultanpur Lodhi	76389.68551	Not Recommended
9	PO_KT_SL_BS_16	Sultanpur Lodhi	54409.45086	Not Recommended
10	PO_KT_SL_BS_16A	Sultanpur Lodhi	54658.52347	Not Recommended
11	PO_KT_SL_BS_17	Sultanpur Lodhi	2464.56094	Recommended Except Forest Deptt.
12	PO_KT_SL_BS_18	Sultanpur Lodhi	71901.91599	Recommended Except Forest Deptt.
13	PO_KT_SL_BS_19	Sultanpur Lodhi	160571.094	Recommended Except Forest Deptt.
14	PO_KT_SL_BS_20	Sultanpur Lodhi	13276.67709	Not Recommended
15	PO_KT_SL_BS_21	Sultanpur Lodhi	17420.46235	Not Recommended
16	PO_KT_SL_BS_22	Sultanpur Lodhi	5932.798806	Recommended Except Forest Deptt.
17	PO_KT_SL_BS_22(I)	Sultanpur Lodhi	8138.62406	Not Recommended
18	PO_KT_SL_BS_22(II)	Sultanpur Lodhi	13909.70281	Not Recommended
19	PO_KT_SL_BS_22(III)	Sultanpur Lodhi	8628.762995	Not Recommended
20	PO_KT_SL_BS_22(IV)	Sultanpur Lodhi	1673.563308	Not Recommended
21	PO_KT_SL_BS_22(V)	Sultanpur Lodhi	51031.91577	Not Recommended
22	PO_KT_SL_BS_22(VI)	Sultanpur Lodhi	3606.91816	Not Recommended
23	PO_KT_SL_BS_22(VII)	Sultanpur Lodhi	807.327835	Not Recommended
24	PO_KT_SL_BS_22(VIII)	Sultanpur Lodhi	3153.455961	Not Recommended
25	PO_KT_SL_BS_22(IX)	Sultanpur Lodhi	6625.133937	Not Recommended
26	PO_KT_SL_BS_23	Sultanpur Lodhi	34878.12781	Not Recommended

Agriculture Mining Sites

Sr. No.	Name of Land Owner	Village name	Had Bast No.	Khasra No.	Area (Sq. m.)	Recommended or Not
1.	Pal Singh, Nachatar, Achar Singh s/o Balbir Singh, harjinder Singh, Gurvinder Singh s/o fakkar Singh vill. Talwandi Chaudhrian	Talwandi Chaudhrian	73	74//17,18,24 86//5	16877	Recommended



2.	Baljinder Singh s/o sarup singh , Shabba Singh s/o Bhagat Singh vill. Faridpur and others.	Faridpur	83	14//11,14 24//16,5,6,15/1,15/2 25//1,5 21//23,24,25	38000	Not Recommended (During Demarcation of this site on dated 22/11/2022 with Revenue staff, the Land owners Refused to Give this Agriculture site for Sand Mining. with Reason that their family dispute.
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The inspection report along with observation of respective Members of Sub-Division Level Committee Sultanpur Lodhi in this regard are shown below as :-

1. Tehsildar Sultanpur Lodhi

- Kml Site No. PO_KT_SL_BS_14(XIII) situated in the village Amritpur and mining can be Done in Low River Discharge.
- PO_KT_SL_BS_14(XV) situated in the Vill. Amritpur in between River flow and material not accessible.
- PO_KT_SL_BS_14(XVI) situated in vill. Jhuggian Dogran in between River flow and material not accessible. High Tension Wire also crossing above this Site.
- PO_KT_SL_BS_14(XVII) situated in Mand Dhunda in between River flow and material not accessible.
- PO_KT_SL_BS_14(XVIII) Situated in Mand Dhunda and mining can be Done in Low River Discharge.
- PO_KT_SL_BS_14(XIX) Situated in Mand Dhunda and mining can be Done in Low River Discharge.
- PO_KT_SL_BS_14(XX) Situated in Mand Dhunda and mining can be Done in Low River Discharge.
- PO_KT_SL_BS_15 Situated in vill. sherpur Dogran in between Main River flow and material not accessible.
- PO_KT_SL_BS_16 Situated in vill. sherpur Dogran in between Main River flow and material not accessible.
- PO_KT_SL_BS_16A Situated in vill. sherpur Dogran in between Main River flow and material not accessible.
- PO_KT_SL_BS_17 Situated in vill. Bhani Bahadur (Tarn taran side) and mining can be Done in Low River Discharge because a small creek lie between the access.
- PO_KT_SL_BS_18 Situated in VIII. Passan kadim, 70 percent of land is government land but most of the land is cultivated by Farmers, mining can be Done in Low River Discharge.
- PO_KT_SL_BS_19 Situated in VIII. Bhim Jadid, most of the land is cultivated by Farmers, mining can be Done in Low River Discharge also need owner's consent.



- PO_KT_SL_BS_20 Situated in vill. Bhim jadid in between Main River flow and material not accessible.
- PO_KT_SL_BS_21 Situated in vill. Rampur Gaura in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 Situated in vill. Mand Gujjarpur beyond on creak of water and mining can be Done in Low River Discharge.
- PO_KT_SL_BS_22(1) Situated in vill. Mand Khanpur in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 (II) Situated in vill. Mand Khanpur in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 (III) Situated in vill. Mand Gujjarpur in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 (IV) Situated in vill. Mand Gujjarpur in between Main River flow and material not accessible
- PO_KT_SL_BS_22 (V) Situated in vill. Mand Hazara in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 (VI), PO_KT_SL_BS_22 (VII) Situated in vill. Gamewal in between Main River flow and material not accessible.
- PO_KT_SL_BS_22 (VIII) , PO_KT_SL_BS_22 (IX) and PO_KT_SL_BS_23 Situated in harike Pond Area (Bird sanctuary) in between Main River flow and material not accessible.

All these sites need Demarcation through total station or DGPS as these Sites Falls within the River so that proper ownership can be found before any mining operation.

2. Block Development and Panchayat Officer

No objection from BDPO but All sites need Demarcation through total station or DGPS as these Sites Falls within the River so that proper ownership can be found before any mining operation.

3. Divisional Forest Officer, Department of Forests and Wildlife Prevention, Jalandhar at Phillaur Punjab

I. During the site inspection representative of the wildlife department objected to proposed any mining site in River bed of River Beas due to **"Beas River Conservation Reserve"** and **declared as Ramsar Site**, Notification of Department Of Forest And Wildlife Preservation Government Of Punjab Notification No. 34/13/2017-FT-5/1052756/1 Chandigarh dated 29-08-2017.

II. **Divisional Forest officer (Territorial) Phillaur:-** During the site inspection representative of the Forest Department (Territorial) objected to proposed any mining site in River bed of River Beas and produced a notification no. 34/12/2019-FT5/1499748/1 Chandigarh Dated 11-06-2019.

The Department of Forest and Wildlife objected to any type of mining activity in river Bed of River Beas

4. Environmental Engineer, Punjab Pollution Control Board

The proposed mining sites shall obtain the prior environmental clearance from SEIAA as per the EIA notification 2006 and subsequent amendments and shall obtain the consent to establish/consent to operate from the Punjab Pollution Control Board under the water act 1974 and air act 1981 before its establishment and commissioning respectively.



All the above said quarries are more than 50 meters from any public place such as public roads and Buildings or Residential Areas and more than 10 meters from village roads, 7.5 meters from nearby Private/government Land. Sand is available in all the above-mentioned site;

5. **Executive Engineer, Building & Roads, Punjab Public Works Department**

It has been observed that the above said sand sites are more than 1.0 KM from any Bridge Or National Highway and more than 500 meters upstream/downstream of any High Level Bridge and 250 meters upstream/downstream of other bridges. Therefore above mentioned proposed sand mining site fulfill all the instructions of PWD department. So, there is no objection in this regard.

6. **Executive Engineer, Irrigation Branch, Department of Water Resources Punjab**

It has been observed that the above said potential sand sites are more than 50 meters distance from any Reservoir, Tank, Canal etc. There is no objection in this regard.

7. **Executive Engineer, Drainage-cum-Mining, Department of Water Resources Punjab**

- It has been observed that for the above said sand quarries, PO_KT_SL_BS_14(XVI) situated in vill. Jhuggian Dogran in between River flow and material not accessible. High Tension Wire also crossing above this Site and Flood protection work in front of this site.
- PO_KT_SL_BS_16, 16A situated in vill. Sherpur Dogran, PO_KT_DW_BS_22(VII), PO_KT_DW_BS_22(VIII) Situated in vill. Gamewal in between River flow and material not accessible and flood protection works also near this site.

For Remaining Sites there is no Flood Protection Embankment within 100 meters

(inside/outside) and no Flood protection works exists near this site.

There is no objection in this regard.

8. **Chief Agriculture Officer, Department of Agriculture, Kapurthala, Punjab**

There is no objection on above mining proposed sites shown above.

 Divisional Forest Office Wildlife Jalandhar at Phillaur	 Environmental Engineer PPCB Jalandhar	 Executive Engineer Const. Division PWD (B&R)-2 kapurthala	 Executive Engineer Bist Doab Division Jalandhar(Irrigation)
 Divisional Forest Officer (Territorial) Phillaur	 Chief Agriculture Officer Kapurthala	 Tehsildar Sultanpur Lodhi	 Block Development & Panchayat Officer Sultanpur Lodhi
 Executive Engineer Jalandhar Drainage-cum- District Mining Officer Kapurthala.	 Sub Divisional Magistrate Sultanpur Lodhi		



2.21.E 25 (HoFF) 6
Pl. Speak \$
1.9.17

Government of Punjab 21.E 25 (2.21)
Department of Forests and Wildlife Preservation
(Forest Branch) DO (F.W)

NOTIFICATION

No. 34/13/2017-Ft-5/1052756/1 Chandigarh, dated the 29/8/2017

Whereas the Government of Punjab is of the opinion that due to its ecological, floral and faunal significance for the purpose of protecting, propagating and developing wildlife and aquatic fauna and its environment, the area mentioned in the following schedule should be declared as **Beas River Conservation Reserve**.

Now, therefore, in exercise of powers conferred under Section 36-A of the Wildlife (Protection) Act, 1972, the Governor of Punjab is pleased to declare the area of River Beas from 52 Head Talwara to Harike Barrage as "Conservation Reserve" from the date of issue of this notification. . The provisions of sub section (2) of Sector 18, Sub Section (2), (3) and (4) of section 27, Section 30,32 and clauses (b) and (c) of Section 33 of the Wildlife (Protection) Act, 1972 as amended from time to time shall also apply to the Conservation Reserve being notified. Detail of Area is given as under: -

"River Beas with all its water channels from 52 Head Talwara to Harike Barrage including all Government areas in River Beas.

Himmat Singh

Special Chief Secretary, Government of Punjab
Department of Forests and Wildlife Preservation

Endst. No.34/13/2017-Ft-5/1052756/2-9 Chandigarh, dated the 29/8/2017

A copy is forwarded to the following for information and further necessary action: -

1. Principal Chief Conservator of Forests (HoFF), Punjab.
2. Principal Chief Conservator of Forests (HAG+) and Chief Wildlife Warden, Punjab.
3. All Chief Conservator of Forests/Conservator of Forests, Punjab.
4. Divisional Forests Officer (Territorial), Amritsar, Jalandhar, Ferozepur, Gurdaspur, Pathankot and Hoshiarur
5. Divisional Forests Officer (Wildlife), Ferozepur, Pathankot and Hoshiapur
6. Deputy Commissioner, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur.
7. Senior Superintendent of Police, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur.
8. A copy with a spare copy of the notification is forwarded to the Controller, Printing & Stationery, Punjab for publication the same in Government gazette **(through Nodal Officer, o/o Principal Chief Conservator of Forests, Mohali.)**

Pl. Pooj Salub
21.E 25 (2.21)
U. (wild life)
419



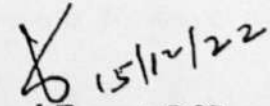
Additional Secretary, Government of Punjab
Department of Forests and Wildlife Preservation

Government of Punjab
Department of Forest & Wildlife Preservation
O/o Divisional Forest Officer, Wildlife Division, Phillaur

CERTIFICATE

TO WHOM IT MAY CONCERN

It is certified as per the report of Forest Range Officer, Wildlife Range, Kapurthala vide Letter No. 37/ KPT Dated 15-12-2022 (Copy Enclosed) that due to ecological importance and presence of rare species Beas River has been declared as Conservation Reserve under Wildlife (Protection) Act, 1972 by Government of Punjab through Notification No. 34/13/2017-Fl-5/1052756/1 dated 29-08-2017 (Copy enclosed). It is now a Protected Area. This reserve has rich biodiversity in terms of very rare and endangered wild animals and birds species such as Indus River Dolphins, Gharials, Otters and many more. Further, Beas River used to attract migratory birds from other countries during winter season and is also declared as "RAMSAR SITE" also known as Wetland of International Importance by Ramsar Convention in Unison with Government of India. The department had released Gharials in the reserve under Gharial Reintroduction Project in order to enrich its biodiversity. So, mining is prohibited in Beas River Conservation Reserve under Wildlife (Protection) Act, 1972.


Divisional Forest Officer,
Wildlife Division,
Phillaur.



ਨੰਬਰ 37 Hpt
ਮਿਤੀ 15/12/2017

ਵੱਲੋਂ,
ਵਣ ਰੱਜ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਰੱਜ,
ਕਪੂਰਥਲਾ।

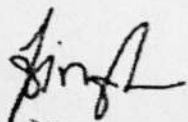
ਸੇਵਾ ਵਿਖੇ,

ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਮੰਡਲ,
ਫਿਲੌਰ।

ਵਿਸ਼ਾ: ਮਾਇਨਿੰਗ ਸਾਈਟਸ ਲਈ ਸਰਟੀਫਿਕੇਟ ਦੇਣ ਸਬੰਧੀ ਰਿਪੋਰਟ।

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਦੇ ਸਬੰਧ ਵਿੱਚ ਬੇਨਤੀ ਹੈ ਕਿ ਆਪ ਜੀ ਵੱਲੋਂ ਮੰਗੀ ਗਈ ਰਿਪੋਰਟ ਹੇਠ ਲਿਖੇ ਅਨੁਸਾਰ ਹੈ ਜੀ:-

It is certified that due to ecological importance and presence of rare species Beas River has been declared as Conservation Reserve under Wildlife (Protection) Act, 1972 by Government of Punjab through Notification No 34/13/2017-Pt-5/1052756/1 dated 29-08-2017. (Copy enclosed). It is now Protected Area. This reserve has rich biodiversity in terms of very rare and endangered wild animals and birds species such as Indus River Dolphin, Gharials, Otters and many more. Further, Beas River used to attract migratory birds from other countries during winter season and is also declared as "RAMSAR SITE" also known as Wetland of International Importance by Ramsar Convention in Unison with Government of India. The department had released Gharials in the reserve under Gharial Reintroduction Project in order to enrich its biodiversity. So, mining is prohibited in Beas River Conservation Reserve under Wildlife (Protection) Act, 1972.


ਵਣ ਰੱਜ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਰੱਜ,
ਕਪੂਰਥਲਾ।



Government of Punjab
Department of Forests and Wildlife Preservation
(Forest Branch)

NOTIFICATION

No. 34/13/2017-Ft-5/1052-756/1 Chandigarh, dated the 29/8/2017

Whereas the Government of Punjab is of the opinion that due to its ecological, floral and faunal significance for the purpose of protecting, propagating and developing wildlife and aquatic fauna and its environment, the area mentioned in the following schedule should be declared as **Beas River Conservation Reserve**

Now therefore, in exercise of powers conferred under Section 36-A of the Wildlife (Protection) Act, 1972, the Governor of Punjab is pleased to declare the area of River Beas from 52 Head Talwara to Harike Barrage as Conservation Reserve from the date of issue of this notification. The provisions of sub-section (2) of Section 18, Sub-Section (3), (7) and (4) of section 27, Section 30, 32, and clauses (b) and (c) of Section 33 of the Wildlife (Protection) Act, 1972, as amended from time to time shall also apply to the Conservation Reserve being notified. Detail of Area is given as under:-

"River Beas with all its water channels from 52 Head Talwara to Harike Barrage including all Government areas in River Beas.

Himmat Singh

Special Chief Secretary, Government of Punjab
Department of Forests and Wildlife Preservation

Endst. No. 34/13/2017-Ft-5/1052-756/1 Chandigarh, dated the 29/8/2017

A copy is forwarded to the following for information and further necessary action:-

1. Principal Chief Conservator of Forests (HOFF), Punjab
2. Principal Chief Conservator of Forests (HAG+) and Chief Wildlife Warden, Punjab
3. All Chief Conservator of Forests/Conservator of Forests, Punjab
4. Divisional Forests Officer (Territorial), Amritsar, Jalandhar, Ferozepur, Gurdaspur, Pathankot and Hoshiarpur
5. Divisional Forests Officer (Wildlife), Ferozepur, Pathankot, and Hoshiarpur
6. Deputy Commissioner, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur
7. Senior Superintendent of Police, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur
8. A copy with a spare copy of the notification is forwarded to the Controller, Printing & Stationery, Punjab for publication the same in Government gazette (through Nodal Officer, o/o Principal Chief Conservator of Forests, Mohali.)



Additional Secretary, Government of Punjab
Department of Forests and Wildlife Preservation



ਦਫਤਰ ਵਣ ਮੰਡਲ ਅਫਸਰ, ਜਲੰਧਰ
OFFICE OF DIVISIONAL FOREST OFFICER, JALANDHAR

ਪੰਤਰ ਨੰਬਰ : JFD/PV...7.152
ਮਿਤੀ : 19/09/2022

Ph. No. : 01826-222537
E-mail : dfojalandhar@gmail.com

(ਪੀ.ਪੀ.ਫਾਖਾ)

ਸੇਵਾ ਵਿਖੇ,

ਰਾਜਸਥਾਨੀ ਇੰਜੀਨੀਅਰ-ਕਮ,
ਜਿਲਾ ਮਾਈਨਿੰਗ ਅਫਸਰ,
ਕਪੂਰਥਲਾ।

ਵਿਸ਼ਾ:- ਜਿਲਾ ਕਪੂਰਥਲਾ ਅਧੀਨ ਦਰਿਆ ਬਿਆਸ ਔਦਰ ਪ੍ਰਿੰਸਪਲ ਡੀ/ਸਿਲਟਿੰਗ/ ਐਕਸਕਾਵੇਸ਼ਨ ਦੇ ਕੰਮ ਅਤੇ ਦੋ ਨੰਬਰ ਐਕਟੀਵਿਟੀਜ਼ ਰੋਡ ਪੱਛਾਂ ਦੇ ਕੰਮਾਂ ਸਬੰਧੀ।
ਹਵਾਲਾ:- ਆਖ ਦੇ ਦਫਤਰ ਦਾ ਪੰਤਰ ਨੰ: 538 ਮਿਤੀ 14-09-2022

ਉਪਰੋਕਤ ਵਿਖੇ ਤੇ ਹਵਾਲੇ ਅਧੀਨ ਪੰਤਰ ਦੇ ਸਬੰਧ ਵਿੱਚ ਵਣ ਰੋਜ ਅਫਸਰ ਕਪੂਰਥਲਾ ਦੇ ਪੰਤਰ ਨੰ: 764-ਕੇ ਮਿਤੀ 04-10-2022 ਦੇ ਹਵਾਲੇ ਅਧੀਨ ਪ੍ਰਾਪਤ ਹੋਈ ਰਿਪੋਰਟ ਨੂੰ ਮੁੱਖ ਰੱਖਦਿਆਂ ਪੰਤਰ ਵਿੱਚ ਦਰਜ ਸਾਈਟਾਂ ਦੀ ਡਿਪੈਂਟ ਹੇਠ ਨਿੱਚੇ ਅਨੁਸਾਰ ਹੈ:-

Sr. No	Name of Work	Remarks
1	Excavation of Sand from Agriculture land between FPE and Advance Bandh Village Faridpur Tehsil Sultanpur Lodhi Distt. Kapurthala.	ਵਣ ਵਿਭਾਗ ਦਾ ਡਕਥਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
2	Estimate for Desilting from U/S of Goindwal Bridge in River Beas at Village Amritpur in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਡਕਥਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
3	Work of Excavation of Minor Minerals from Government approved site Mand Raipur Araylan including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਡਕਥਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
4	Work of Excavation of Minor Minerals from Government approved site Mand Chakoki-1 including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਮੋਡ ਚੌਕੀ ਵਿਖੇ 348 ਬਨਾਲ 9 ਮਲੇ ਡਕਥਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।
5	Work of Excavation of Minor Minerals from Government approved site Mand Chakoki-2 including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਮੋਡ ਚੌਕੀ ਵਿਖੇ 348 ਬਨਾਲ 9 ਮਲੇ ਡਕਥਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।
6	Work of Excavation of Minor Minerals from Government approved site Mand Dhillwan including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਡਕਥਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
7	Work of Excavation of Minor Minerals from Government approved site Village Booh (Agriculture sand mine) including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਖੂਹ ਵਿਖੇ 399 ਬਨਾਲ 12 ਮਲੇ ਡਕਥਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।

ਇਸ ਤੋਂ ਇਲਾਵਾ ਕਿਸੇ ਵੀ ਡਰਾ ਦੇ ਵਣ ਡਕਥੇ ਤੇ ਮਾਈਨਿੰਗ ਨਾ ਕੀਤੀ ਜਾਵੇ।

ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜਲੰਧਰ ਡਿਵੀਜ਼ਨ।

ਵਿੱਠ ਐਕਟ ਨੰਬਰ ਮਿਤੀ

ਪੰਤਰ ਦੀ ਨਕਲ ਵਣ ਰੋਜ ਅਫਸਰ ਕਪੂਰਥਲਾ ਨੂੰ ਉਹਨਾਂ ਦੇ ਪੰਤਰ ਨੰ: 764-ਕੇ ਮਿਤੀ 04-10-2022 ਦੇ ਹਵਾਲੇ ਵਿੱਚ ਭੇਜਣੇ ਨਿਰਧਾਰਿਤ ਹੈ ਕਿ ਵਣ ਡਕਥੇ ਦੇ ਕਿਸੇ ਵੀ ਡਕਥੇ ਵਿੱਚ ਮਾਈਨਿੰਗ ਨਾ ਹੋਣ ਦਿੱਤੀ ਜਾਵੇ।

ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜਲੰਧਰ ਡਿਵੀਜ਼ਨ।



Annexure-F
(Sp. Gravity, Particle size & Bulk Density data of sand
from NABL lab)





RAPPID TEST LAB PVT. LTD.

Our Dream is Quality only....



Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Near Radiant International School, Patna - 801105 (Bihar)

To, District Mining Officer , Kapurthala Member of Secretary of Sub divisional Committees Kapurthala		ULR No. : TC1021422000000175F	
		Date of Receipt: 29.11.2022	
		Date of Testing: 01.12.2022-02.12.2022	
		Date of Report : 03.12.2022	
Description of Sample : Sandi Soil			
Location : Village- Talvandi Chau dharian , Tahsil – Sultanpur Lodhi Agriculture Land			
Ref No: Nil Dated: 29.11.2022			
SL. No.	TEST PARAMETERS	TEST METHOD	Results
1	Specific Gravity	IS 2720 (P-3)	2.61
2	Bulk density , g/cc	IS 2386 (P-3)	1.56



End of Test Report



Authorized Signatory

Terms & Conditions:

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4. Total liability of hour Test Lab is limited to the invoiced amount.,
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Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Near Radiant International School, Patna - 801105 (Bihar)

To,	ULR No. : TC1021422000000176F
District Mining Officer , Kapurthala	Date of Receipt: 29.11.2022
Member of Secretary of Sub divisional Committees Kapurthala	Date of Testing: 01.12.2022-02.12.2022
	Date of Report : 03.12.2022

Description of Sample : Sandi Soil

Location : Village- Booh , Tahsil – Kapurthala Agriculture Land

Ref No: Nil Dated: 29.11.2022

SL. No.	TEST PARAMETERS	TEST METHOD	Results
1	Specific Gravity	IS 2720 (P-3)	2.62
2	Bulk density , g/cc	IS 2386 (P-3)	1.55



End of Test Report



Authorized-Signatory

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Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Near Radiant International School, Patna - 801105 (Bihar)

To,	ULR No. : TC1021422000000177F
District Mining Officer , Kapurthala	Date of Receipt: 29.11.2022
Member of Secretary of Sub divisional Committees Kapurthala	Date of Testing: 01.12.2022-02.12.2022
	Date of Report : 03.12.2022

Description of Sample : Sandi Soil
Location : Village- Jhugain Arain , Tahsil – Sultanpur Lodhi River bed
Ref No: Nil **Dated:** 29.11.2022

SL. No.	TEST PARAMETERS	TEST METHOD	Results
1	Specific Gravity	IS 2720 (P-3)	2.63
2	Bulk density ,g/cc	IS 2386 (P-3)	1.57



End of Test Report



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RAPPID TEST LAB PVT. LTD.

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Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Near Radiant International School, Patna - 801105 (Bihar)

To,		ULR No. : TC1021422000000178F	
District Mining Officer , Kapurthala		Date of Receipt: 29.11.2022	
Member of Secretary of Sub divisional Committees Kapurthala		Date of Testing: 01.12.2022-02.12.2022	
		Date of Report : 03.12.2022	
Description of Sample : Sandi Soil			
Location : Village- Mand Gurdaspur , Tahsil – Bhulath River bed			
Ref No: Nil Dated: 29.11.2022			
SL. No.	TEST PARAMETERS	TEST METHOD	Results
1	Specific Gravity	IS 2720 (P-3)	2.61
2	Bulk density ,g/cc	IS 2386 (P-3)	1.53



End of Test Report



Authorized Signatory

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- 5 Report refers to the sample received by Rappid Test Lab Pvt. Ltd. unless mentioned otherwise.



RAPPID TEST LAB PVT. LTD.

Our Dream is Quality only....



Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Near Radiant International School, Patna - 801105 (Bihar)

To,	ULR No. : TC1021422000000139F
District Mining Officer , Kapurthala	Date of Receipt: 21.11.2022
Member of Secretary of Sub divisional Committees Jalandhar	Date of Testing: 21.11.2022-22.11.2022
	Date of Report : 22.11.2022

Description of Sample : Sandi Soil
Location : Village- Chacoci, Kapurthala
Ref No: Nil Dated: 21.11.2022

SL. No.	TEST PARAMETERS	TEST METHOD	Results
1	Specific Gravity	IS 2720 (P-3)	2.64
2	Bulk density ,g/cc	IS 2386 (P-3)	1.57



End of Test Report



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Annexure-G
(Final Block Coordinates)



Final Potential Block Coordinates

SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	AREA	ADMINISTRATIVE BLOCK
PO_KT_DW_BS_0 9	1	31°31'43.98"N	75°19'45.10"E	4.66	DHILWAN
	2	31°31'41.39"N	75°19'46.05"E		
	3	31°31'34.86"N	75°19'45.11"E		
	4	31°31'31.30"N	75°19'42.75"E		
	5	31°31'29.01"N	75°19'38.72"E		
	6	31°31'32.96"N	75°19'38.56"E		
	7	31°31'39.05"N	75°19'41.26"E		
PO_KT_DW_BS_1 4(II)	1	31° 26' 9.069" N	75° 12' 24.308" E	0.96	DHILWAN
	2	31° 26' 6.146" N	75° 12' 21.932" E		
	3	31° 26' 4.548" N	75° 12' 21.550" E		
	4	31° 26' 5.829" N	75° 12' 20.345" E		
	5	31° 26' 8.937" N	75° 12' 18.910" E		
PO_KT_DW_BS_1 4(III)	1	31° 25' 58.775" N	75° 12' 20.172" E	2.33	DHILWAN
	2	31° 25' 57.378" N	75° 12' 18.694" E		
	3	31° 25' 59.240" N	75° 12' 17.388" E		
	4	31° 26' 2.689" N	75° 12' 17.288" E		
	5	31° 26' 8.817" N	75° 12' 16.416" E		
	6	31° 26' 8.716" N	75° 12' 18.393" E		
	7	31° 26' 5.797" N	75° 12' 19.294" E		
	8	31° 26' 1.111" N	75° 12' 20.730" E		
PO_KT_DW_BS_1 4(VIII)	1	31° 23' 46.976" N	75° 11' 15.818" E	0.91	DHILWAN
	2	31° 23' 48.601" N	75° 11' 15.682" E		
	3	31° 23' 49.838" N	75° 11' 16.490" E		
	4	31° 23' 53.202" N	75° 11' 16.565" E		
	5	31° 23' 54.720" N	75° 11' 16.795" E		
	6	31° 23' 56.602" N	75° 11' 17.551" E		
	7	31° 23' 55.168" N	75° 11' 18.043" E		
	8	31° 23' 52.406" N	75° 11' 18.026" E		
	9	31° 23' 50.265" N	75° 11' 18.125" E		
	10	31° 23' 49.146" N	75° 11' 17.704" E		
	11	31° 23' 47.985" N	75° 11' 16.472" E		
PO_KT_DW_BS_1 4(X)	1	31° 23' 49.284" N	75° 11' 7.408" E	0.3	DHILWAN
	2	31° 23' 52.417" N	75° 11' 7.297" E		
	3	31° 23' 53.677" N	75° 11' 7.805" E		
	4	31° 23' 53.716" N	75° 11' 8.379" E		
	5	31° 23' 51.503" N	75° 11' 8.468" E		
PO_KT_SL_BS_14 (XIII)	1	31° 23' 27.042" N	75° 10' 40.673" E	1.37	SULTANPUR LODHI
	2	31° 23' 33.704" N	75° 10' 45.807" E		



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Kapurthala District,
Punjab*

SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	AREA	ADMINISTRATIVE BLOCK
	3	31° 23' 33.671" N	75° 10' 47.615" E		
	4	31° 23' 33.151" N	75° 10' 47.820" E		
	5	31° 23' 32.084" N	75° 10' 47.652" E		
	6	31° 23' 31.390" N	75° 10' 47.159" E		
	7	31° 23' 27.682" N	75° 10' 43.485" E		
PO_KT_SL_BS_14 (XVIII)	1	31° 18' 57.641" N	75° 6' 58.635" E	5.73	SULTANPUR LODHI
	2	31° 19' 0.414" N	75° 6' 58.759" E		
	3	31° 19' 2.298" N	75° 6' 59.404" E		
	4	31° 19' 5.054" N	75° 6' 58.968" E		
	5	31° 19' 11.303" N	75° 6' 58.799" E		
	6	31° 19' 12.680" N	75° 7' 5.199" E		
	7	31° 19' 9.846" N	75° 7' 5.236" E		
	8	31° 19' 4.256" N	75° 7' 4.673" E		
	9	31° 19' 1.914" N	75° 7' 3.882" E		
PO_KT_SL_BS_14 (XIX)	1	31° 18' 47.265" N	75° 6' 57.474" E	0.88	SULTANPUR LODHI
	2	31° 18' 51.891" N	75° 6' 57.335" E		
	3	31° 18' 54.957" N	75° 6' 58.514" E		
	4	31° 18' 55.842" N	75° 6' 58.953" E		
	5	31° 18' 55.657" N	75° 7' 0.037" E		
PO_KT_SL_BS_14 (XX)	1	31° 18' 39.417" N	75° 6' 52.738" E	0.36	SULTANPUR LODHI
	2	31° 18' 38.658" N	75° 6' 52.071" E		
	3	31° 18' 40.455" N	75° 6' 52.330" E		
	4	31° 18' 44.587" N	75° 6' 54.195" E		
PO_KT_SL_BS_17	1	31° 16' 39.500" N	75° 6' 24.380" E	0.25	SULTANPUR LODHI
	2	31° 16' 38.068" N	75° 6' 23.571" E		
	3	31° 16' 39.662" N	75° 6' 23.346" E		
	4	31° 16' 42.841" N	75° 6' 24.450" E		
	5	31° 16' 43.371" N	75° 6' 24.894" E		
	6	31° 16' 41.147" N	75° 6' 24.482" E		
PO_KT_SL_BS_18	1	31° 15' 59.305" N	75° 7' 23.862" E	7.19	SULTANPUR LODHI
	2	31° 15' 59.260" N	75° 7' 23.090" E		
	3	31° 16' 5.031" N	75° 7' 22.523" E		
	4	31° 16' 6.469" N	75° 7' 21.196" E		
	5	31° 16' 11.447" N	75° 7' 12.356" E		
	6	31° 16' 17.991" N	75° 7' 9.617" E		
	7	31° 16' 14.605" N	75° 7' 16.768" E		
	8	31° 16' 11.265" N	75° 7' 22.748" E		
	9	31° 16' 8.526" N	75° 7' 24.188" E		
	10	31° 16' 4.968" N	75° 7' 24.653" E		
PO_KT_SL_BS_19	1	31° 14' 42.469" N	75° 6' 33.228" E	16.06	SULTANPUR LODHI



*District Survey Report
Kapurthala District,
Punjab*

SANDBLOCK	POINT NO	LATITUDE	LONGITUDE	AREA	ADMINISTRATIVE BLOCK
	2	31° 14' 41.178" N	75° 6' 31.897" E		
	3	31° 14' 40.121" N	75° 6' 30.259" E		
	4	31° 14' 38.653" N	75° 6' 28.968" E		
	5	31° 14' 37.039" N	75° 6' 27.645" E		
	6	31° 14' 31.756" N	75° 6' 22.152" E		
	7	31° 14' 30.652" N	75° 6' 16.107" E		
	8	31° 14' 31.158" N	75° 6' 10.067" E		
	9	31° 14' 30.332" N	75° 6' 5.862" E		
	10	31° 14' 30.214" N	75° 5' 59.294" E		
	11	31° 14' 30.221" N	75° 5' 59.307" E		
	12	31° 14' 36.509" N	75° 6' 7.991" E		
	13	31° 14' 37.150" N	75° 6' 12.143" E		
	14	31° 14' 41.159" N	75° 6' 23.876" E		
	15	31° 14' 44.550" N	75° 6' 31.579" E		
	16	31° 14' 44.393" N	75° 6' 33.091" E		
	17	31° 14' 43.475" N	75° 6' 33.706" E		
	PO_KT_SL_BS_22	1	31° 15' 29.661" N		
2		31° 15' 32.311" N	75° 5' 24.023" E		
3		31° 15' 34.510" N	75° 5' 26.764" E		
4		31° 15' 32.830" N	75° 5' 26.287" E		
5		31° 15' 30.110" N	75° 5' 20.260" E		



BENCH MARK

Bench Mark	Coordinates	Elevation	Sandbars Code
Dhilwan Railway Bridge (Top level of Pier)	31.513900°N 75.305061°E	229.410	04-09
Goindwal Road Bridge	31.373907°N 75.167276°E	226.997	14(IV)- 23
Chakoki	31.565497°N 75.363310°E	229.576	1-03

Note: The survey was started by taking Top level of Pier of Dhilwan Railway Bridge as a first reference point/benchmark.

Executive Engineer-cum-
District Mining officer
Kapurthala



BENCH MARK PHOTOGRAPHS



BENCH MARK PHOTOGRAPHS



Annexure-H

(Detailed Lithological Section of Agriculture Sites & Non replenish site)



**Name of Owner: Pal Singh, Nachatar, Achar Singh, Harjinder Singh, Fakkar Singh
Vill- Talwandi Choudhrian**

Depth	Litholog (upto 3m)
0 to 0.30m	Soil
0.31 to 3.0	Sand



Calculation of total reserve:

Area(Ha.)*10000*Bulk Density*Depth

$1.69 * 10000 * 1.57 * 2.7 = 71,639.1 \text{ MT}$

Total Mineral to be mined (MT) Considering 60% = 42,983.46 MT



Mand Raipur Aaraiyan, Tehsil: Bholath, District- Kapurthala

Depth	Litholog (upto 3m)
0 to 0.60m	Soil
0.61 to 3.0	Sand



Calculation of total reserve:

Area(Ha.)*10000*Bulk Density*Depth

$4.07 * 10000 * 1.57 * 2.4 = 1,53,357.6 \text{ MT}$

Total Mineral to be mined (MT) Considering 60% = 92,014.56 MT



Annexure – I
(Wildlife/DFO Certificate)




Government of Punjab
Department of Forest & Wildlife Preservation
O/o Divisional Forest Officer, Wildlife Division, Phillaur.

CERTIFICATE

TO WHOM IT MAY CONCERN

It is certified as per the report of Forest Range Officer, Wildlife Range, Kapurthala vide Letter No. 43/KPT Date 10-02-2023 (Copy Enclosed) that Beas River has been declared as Conservation Reserve under Wildlife (Protection) Act, 1972 by Punjab Government vide its Notification No. 34/13/2017 Ft-5/1052756/1 dated 29.08.2017 (Copy Enclosed) and is also declared as "RAMSAR SITE" as Wetland of International Importance by Ramsar Convention in Unison with Government of India on dated 21-09- 2019. All the sand bars in District Kapurthala from Sr. No.1 to 41 and Mand Raipur Araiyan mine are habitat of Gharial, Turtles, Smooth Coated Otter, Migratory/Resident Bird Species and Endangered Rare Indus River Dolphin. All these sand bars fall in the flow of Beas River Conservation Reserve. So, Mining cannot be allowed without prior permission of National Board of Wildlife India.


Divisional Forest Officer,
Wildlife Division,
Phillaur.





2.21.E 25 (HoFF) 6
Pl. Speak \$
1.9.17

Government of Punjab 21.E 25 (E.24)
Department of Forests and Wildlife Preservation
(Forest Branch) DO (F.W)

NOTIFICATION

No. 34/13/2017-Ft-5/1052756/1 Chandigarh, dated the 29/8/2017

Whereas the Government of Punjab is of the opinion that due to its ecological, floral and faunal significance for the purpose of protecting, propagating and developing wildlife and aquatic fauna and its environment, the area mentioned in the following schedule should be declared as **Beas River Conservation Reserve**.

Now, therefore, in exercise of powers conferred under Section 36-A of the Wildlife (Protection) Act, 1972, the Governor of Punjab is pleased to declare the area of River Beas from 52 Head Talwara to Harike Barrage as "Conservation Reserve" from the date of issue of this notification. . The provisions of sub section (2) of Sector 18, Sub Section (2), (3) and (4) of section 27, Section 30,32 and clauses (b) and (c) of Section 33 of the Wildlife (Protection) Act, 1972 as amended from time to time shall also apply to the Conservation Reserve being notified. Detail of Area is given as under: -

"River Beas with all its water channels from 52 Head Talwara to Harike Barrage including all Government areas in River Beas.

Himmat Singh

Special Chief Secretary, Government of Punjab
Department of Forests and Wildlife Preservation

Endst. No.34/13/2017-Ft-5/1052756/2-9 Chandigarh, dated the 29/8/2017

A copy is forwarded to the following for information and further necessary action: -

1. Principal Chief Conservator of Forests (HoFF), Punjab.
2. Principal Chief Conservator of Forests (HAG+) and Chief Wildlife Warden, Punjab.
3. All Chief Conservator of Forests/Conservator of Forests, Punjab.
4. Divisional Forests Officer (Territorial), Amritsar, Jalandhar, Ferozepur, Gurdaspur, Pathankot and Hoshiarur
5. Divisional Forests Officer (Wildlife), Ferozepur, Pathankot and Hoshiapur
6. Deputy Commissioner, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur.
7. Senior Superintendent of Police, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur.
8. A copy with a spare copy of the notification is forwarded to the Controller, Printing & Stationery, Punjab for publication the same in Government gazette **(through Nodal Officer, o/o Principal Chief Conservator of Forests, Mohali.)**

Additional Secretary, Government of Punjab
Department of Forests and Wildlife Preservation



Government of Punjab
Department of Forest & Wildlife Preservation
O/o Divisional Forest Officer, Wildlife Division, Phillaur

CERTIFICATE

TO WHOM IT MAY CONCERN

It is certified as per the report of Forest Range Officer, Wildlife Range, Kapurthala vide Letter No. 37/ KPT Dated 15-12-2022 (Copy Enclosed) that due to ecological importance and presence of rare species Beas River has been declared as Conservation Reserve under Wildlife (Protection) Act, 1972 by Government of Punjab through Notification No. 34/13/2017-Fl-5/1052756/1 dated 29-08-2017 (Copy enclosed). It is now a Protected Area. This reserve has rich biodiversity in terms of very rare and endangered wild animals and birds species such as Indus River Dolphins, Gharials, Otters and many more. Further, Beas River used to attract migratory birds from other countries during winter season and is also declared as "RAMSAR SITE" also known as Wetland of International Importance by Ramsar Convention in Unison with Government of India. The department had released Gharials in the reserve under Gharial Reintroduction Project in order to enrich its biodiversity. So, mining is prohibited in Beas River Conservation Reserve under Wildlife (Protection) Act, 1972.

15/12/22
Divisional Forest Officer,
Wildlife Division,
Phillaur.



ਨੰਬਰ 37 Hpt
ਮਿਤੀ 15/12/2017

ਵੱਲੋਂ,

ਵਣ ਰੱਜ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਰੱਜ,
ਕਪੂਰਥਲਾ।

ਸੇਵਾ ਵਿਖੇ,

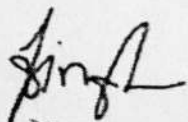
ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਮੰਡਲ,
ਫਿਲੌਰ।

ਵਿਸ਼ਾ : ਮਾਇਨੀੰਗ ਸਾਈਟਸ ਲਈ ਸਰਟੀਫਿਕੇਟ ਦੇਣ ਸਬੰਧੀ ਰਿਪੋਰਟ।

.....

ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਦੇ ਸਬੰਧ ਵਿੱਚ ਬੇਨਤੀ ਹੈ ਕਿ ਆਪ ਜੀ ਵੱਲੋਂ ਮੰਗੀ ਗਈ ਰਿਪੋਰਟ ਹੇਠ ਲਿਖੇ ਅਨੁਸਾਰ ਹੈ ਜੀ:-

It is certified that due to ecological importance and presence of rare species Beas River has been declared as Conservation Reserve under Wildlife (Protection) Act, 1972 by Government of Punjab through Notification No 34/13/2017-Pt-5/1052756/1 dated 29-08-2017. (Copy enclosed). It is now Protected Area. This reserve has rich biodiversity in terms of very rare and endangered wild animals and birds species such as Indus River Dolphin, Gharials, Otters and many more. Further, Beas River used to attract migratory birds from other countries during winter season and is also declared as "RAMSAR SITE" also known as Wetland of International Importance by Ramsar Convention in Unison with Government of India. The department had released Gharials in the reserve under Gharial Reintroduction Project in order to enrich its biodiversity. So, mining is prohibited in Beas River Conservation Reserve under Wildlife (Protection) Act, 1972.


ਵਣ ਰੱਜ ਅਫਸਰ,
ਜੰਗਲੀ ਜੀਵ ਰੱਜ,
ਕਪੂਰਥਲਾ।



Government of Punjab
Department of Forests and Wildlife Preservation
(Forest Branch)

NOTIFICATION

No. 34/13/2017-Ft-5/1052-756/1 Chandigarh, dated the 29/8/2017

Whereas the Government of Punjab is of the opinion that due to its ecological, floral and faunal significance for the purpose of protecting, propagating and developing wildlife and aquatic fauna and its environment, the area mentioned in the following schedule should be declared as **Beas River Conservation Reserve**

Now, therefore, in exercise of powers conferred under Section 36-A of the Wildlife (Protection) Act, 1972, the Governor of Punjab is pleased to declare the area of River Beas from 52 Head Talwara to Harike Barrage as Conservation Reserve from the date of issue of this notification. The provisions of sub-section (2) of Section 18, Sub-Section (3), (7) and (4) of section 27, Section 30, 32, and clauses (b) and (c) of Section 33 of the Wildlife (Protection) Act, 1972, as amended from time to time shall also apply to the Conservation Reserve being notified. Detail of Area is given as under:-

"River Beas with all its water channels from 52 Head Talwara to Harike Barrage including all Government areas in River Beas.

Himmat Singh

Special Chief Secretary, Government of Punjab
Department of Forests and Wildlife Preservation

Encls. No. 34/13/2017-Ft-5/1052-756/1 Chandigarh, dated the 29/8/2017

A copy is forwarded to the following for information and further necessary action:-

1. Principal Chief Conservator of Forests (HOFF), Punjab
2. Principal Chief Conservator of Forests (HAG+) and Chief Wildlife Warden, Punjab
3. All Chief Conservator of Forests/Conservator of Forests, Punjab
4. Divisional Forests Officer (Territorial), Amritsar, Jalandhar, Ferozepur, Gurdaspur, Pathankot and Hoshiarpur
5. Divisional Forests Officer (Wildlife), Ferozepur, Pathankot, and Hoshiarpur
6. Deputy Commissioner, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur
7. Senior Superintendent of Police, Amritsar, Kapurthala, Ferozepur, Gurdaspur and Hoshiarpur
8. A copy with a spare copy of the notification is forwarded to the Controller, Printing & Stationery, Punjab for publication the same in Government gazette (through Nodal Officer, o/o Principal Chief Conservator of Forests, Mohali.)



Additional Secretary, Government of Punjab
Department of Forests and Wildlife Preservation



ਦਫਤਰ ਵਣ ਮੰਡਲ ਅਫਸਰ, ਜਲੰਧਰ
OFFICE OF DIVISIONAL FOREST OFFICER, JALANDHAR

ਪੰਤਰ ਨੰਬਰ : JFD/PV...7.152
ਮਿਤੀ : 19/09/2022

Ph. No. : 01826-222537
E-mail : dfojalandhar@gmail.com

(ਪੀ.ਪੀ.ਫਾਖਾ)

ਸੇਵਾ ਵਿਖੇ,

ਕਾਰਜਕਾਰੀ ਇੰਜੀਨੀਅਰ-ਕਮ,
ਜਿਲਾ ਮਾਈਨਿੰਗ ਅਫਸਰ,
ਕਪੂਰਥਲਾ।

ਵਿਸ਼ਾ:- ਜਿਲਾ ਕਪੂਰਥਲਾ ਅਧੀਨ ਦਰਿਆ ਬਿਆਸ ਔਦਰ ਪ੍ਰਾਇਮਰੀ ਡੀ/ਸਿਲਟਿੰਗ/ ਐਕਸਕਾਵੇਸ਼ਨ ਦੇ ਕੰਮ ਅਤੇ ਦੋ ਨੰਬਰ ਐਕਟੀਵਿਟੀਜ਼ ਰੋਡ ਪੱਛਾਂ ਦੇ ਕੰਮਾਂ ਸਬੰਧੀ।

ਹਵਾਲਾ:- ਆਖ ਦੇ ਦਫਤਰ ਦਾ ਪੰਤਰ ਨੰ: 538 ਮਿਤੀ 14-09-2022

ਉਪਰੋਕਤ ਵਿਖੇ ਤੇ ਹਵਾਲੇ ਅਧੀਨ ਪੰਤਰ ਦੇ ਸਬੰਧ ਵਿੱਚ ਵਣ ਰੋਜ਼ ਅਫਸਰ ਕਪੂਰਥਲਾ ਦੇ ਪੰਤਰ ਨੰ: 764-ਕੇ ਮਿਤੀ 04-10-2022 ਦੇ ਹਵਾਲੇ ਅਧੀਨ ਪ੍ਰਾਪਤ ਹੋਈ ਰਿਪੋਰਟ ਨੂੰ ਮੁੱਖ ਰੱਖਦਿਆਂ ਪੰਤਰ ਵਿੱਚ ਦਰਜ ਸਾਈਟਾਂ ਦੀ ਰਿਪੋਰਟ ਹੇਠ ਲਿਖੇ ਅਨੁਸਾਰ ਹੈ:-

Sr. No	Name of Work	Remarks
1	Excavation of Sand from Agriculture land between FPE and Advance Bandh Village Faridpur Tehsil Sultanpur Lodhi Distt. Kapurthala.	ਵਣ ਵਿਭਾਗ ਦਾ ਰਕਬਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
2	Estimate for Desilting from U/S of Goindwal Bridge in River Beas at Village Amritpur in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਰਕਬਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
3	Work of Excavation of Minor Minerals from Government approved site Mand Raipur Araylan including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਰਕਬਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
4	Work of Excavation of Minor Minerals from Government approved site Mand Chakoki-1 including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਮੰਡ ਚੱਕੋਕੀ ਵਿਖੇ 348 ਬਨਾਲ 9 ਮਰਲੇ ਰਕਬਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।
5	Work of Excavation of Minor Minerals from Government approved site Mand Chakoki-2 including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਮੰਡ ਚੱਕੋਕੀ ਵਿਖੇ 348 ਬਨਾਲ 9 ਮਰਲੇ ਰਕਬਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।
6	Work of Excavation of Minor Minerals from Government approved site Mand Dhillwan including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਵਣ ਵਿਭਾਗ ਦਾ ਰਕਬਾ ਨਹੀਂ ਪੈਂਦਾ ਹੈ।
7	Work of Excavation of Minor Minerals from Government approved site Village Booh (Agriculture sand mine) including weighing at the authorized weigh bridge and unloading at stockyard in District Kapurthala	ਨੋਟੀਫਿਕੇਸ਼ਨ ਨੰਬਰ : 2928-F1-1-71/3934 ਮਿਤੀ 15-10-1971 ਰਾਹੀਂ ਖੂਹ ਵਿਖੇ 399 ਬਨਾਲ 12 ਮਰਲੇ ਰਕਬਾ ਵਣ ਵਿਭਾਗ ਦੇ ਨਾਮ ਤੇ ਅਲਾਟ ਕੀਤਾ ਗਿਆ ਸੀ। ਇਸ ਲਈ ਮਾਈਨਿੰਗ ਕਰਨ ਲਈ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਨਹੀਂ ਬਣਦੀ ਹੈ।

ਇਸ ਤੋਂ ਇਲਾਵਾ ਕਿਸੇ ਵੀ ਡਰਾ ਦੇ ਵਣ ਰਕਬੇ ਤੇ ਮਾਈਨਿੰਗ ਨਾ ਕੀਤੀ ਜਾਵੇ।

ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜਲੰਧਰ ਡਿਵੀਜ਼ਨ।

ਵਿੱਠ ਐਕਟ ਨੰਬਰ ਮਿਤੀ

ਪੰਤਰ ਦੀ ਨਕਲ ਵਣ ਰੋਜ਼ ਅਫਸਰ ਕਪੂਰਥਲਾ ਨੂੰ ਉਹਨਾਂ ਦੇ ਪੰਤਰ ਨੰ: 764-ਕੇ ਮਿਤੀ 04-10-2022 ਦੇ ਹਵਾਲੇ ਵਿੱਚ ਭੇਜਣੇ ਨਿਰਦੇਸ਼ਿਤ ਜਾਂਦਾ ਹੈ ਕਿ ਵਣ ਰਕਬੇ ਦੇ ਕਿਸੇ ਵੀ ਡਰਾ ਵਿੱਚ ਮਾਈਨਿੰਗ ਨਾ ਹੋਣ ਦਿੱਤੀ ਜਾਵੇ।

ਵਣ ਮੰਡਲ ਅਫਸਰ,
ਜਲੰਧਰ ਡਿਵੀਜ਼ਨ।



Annexure – J
(Public Consultation)



PUBLIC CONSULTATION

PUBLIC CONSULTATION: To incorporate changes and suggestions of general public for the proposed area for mining the public consultation is necessary. When the DSR with mining lease area details is put in public domain on district portals the suggestions and comments from different stakeholders are incorporated in final DSR.

PROCEDURE FOR PUBLIC CONSULTATION:

Preliminary Draft DSR consisting of list of potential mining zones was uploaded Public domain on dated of Public domain 14/12/2022 dated on website <https://kapurthala.gov.in/>.

Seeking comments /observation /suggestion from general public /various stakeholder. Press releases for same was given in newspaper. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatedari land, desiltation location (ponds/lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per **Annexure-V**. The details regarding cluster and contiguous cluster needs to be provided in **Annexure-VI**. The details of the transportation need to be provided in **Annexure-VII**.

Objection: - Adjoining private Land owners/local villagers/Gram Panchayat village Talwandi Chaudhrian Tehsil Sultanpur Lodhi , Distt. Kapurthala have Objected agriculture Mining site of Sh. Acchar Singh Rana s/o Balbir Singh & others Resident of vill. Talwandi Chaudhrian, Tehsil Sultanpour Lodhi , Distt. Kapurthala which is already included in DSR at the time of public consultation.

Action Taken :- This site is rejected as per Rules by DMO Kapurthala with prior consultation of worthy Deputy Commissioner Kapurthala.



ਸੇਵਾ ਵਿਖੇ .

ਮਾਨਯੋਗ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ
ਕਪੂਰਥਲਾ ।

E-1938554/MA
04/01/23

MA
4/1/23

ਵਿਸ਼ਾ - ਪਿੰਡ ਤਲਵੰਡੀ ਚੌਧਰੀਆਂ ਵਿਖੇ ਪਾਸ ਕੀਤੀ ਅੱਫਰ ਸਿੰਘ ਰਾਣਾ ਦੀ ਖੱਡ ਨੂੰ ਕੈਸਲ ਕਰਵਾਉਣ ਸਬੰਧੀ ।

ਬੇਨਤੀ ਕੀਤੀ ਜਾਂਦੀ ਹੈ ਅਸੀਂ ਪਿੰਡ ਤਲਵੰਡੀ ਚੌਧਰੀਆਂ ਤਹਿਸੀਲ ਸੁਲਤਾਨਪੁਰ ਲੋਧੀ ਜਿਲਾ ਕਪੂਰਥਲਾ ਦੇ ਹੇਠਲੇ ਵਾਲੇ ਹਾਂ ਅਤੇ ਮੈਨੂੰ ਪਤਾ ਲਗਾ ਹੈ ਕਿ ਅੱਫਰ ਸਿੰਘ ਦੀ ਜਮੀਨ ਵਿੱਚ ਰੋੜ ਖੱਡ ਅਲਾਟ ਹੋਣ ਲੱਗੀ ਹੈ ਜਿਸ ਬਾਰੇ ਮੈਂ ਦੱਸਣਾ ਚਾਹੁੰਦਾ ਹਾਂ ਕਿ ਮੇਰੀ ਜਮੀਨ ਅੱਫਰ ਸਿੰਘ, ਪਾਲ ਸਿੰਘ ਨੰਫਤਰ ਸਿੰਘ ਪੁੱਤਰ ਬਲਬੀਰ ਸਿੰਘ ਅਤੇ ਹਰਜਿੰਦਰ ਸਿੰਘ, ਫੁਰਵਿੰਦਰ ਸਿੰਘ ਪੁੱਤਰ ਫੱਕਰ ਸਿੰਘ ਦੀ ਜਮੀਨ ਜਿਸਦਾ ਹੱਦ ਬਸਤ ਨੰਬਰ ਜਿਸਦਾ-ਖਸਰਾ ਨੰਬਰ 74//17,18,24,86//5, ਦੇ ਨਾਲ ਲਗਦੀ ਹੈ । ਜੇਕਰ ਇਸ ਜਮੀਨ ਵਿੱਚ ਮਾਈਨਿੰਗ ਕੀਤੀ ਜਾਂਦੀ ਹੈ ਤਾਂ ਨਾਲ ਲਗਦੀਆਂ ਜਮੀਨਾਂ ਨੂੰ ਨੁਕਸਾਨ ਹੋਵੇਗਾ ਅਤੇ ਸਾਰੇ ਗੁਆਭੀਆਂ/ਗਰਾਮ ਪੰਚਾਇਤ ਨੂੰ ਇਤਰਾਜ਼ ਹੈ । ਇਸ ਤੋਂ ਇਲਾਵਾ ਅੱਫਰ ਸਿੰਘ ਪਹਿਲਾਂ ਵੀ ਨਜਾਇਜ਼ ਮਾਈਨਿੰਗ ਕਰਦਾ ਰਿਹਾ ਹੈ ਅਤੇ ਨਾਲ ਲਗਦੀਆਂ ਕੌਮਤੀ ਜਮੀਨਾਂ ਖਰਾਬ ਕਰ ਦਿੱਤੀਆਂ ਹਨ, ਜਿਸ ਉਪਰ ਮਾਈਨਿੰਗ ਵਿਭਾਗ ਵਲੋਂ ਕਾਰਵਾਈ ਕੀਤੀ ਹੋਈ ਹੈ ਥਾਣਾ ਤਲਵੰਡੀ ਚੌਧਰੀਆਂ ਵਿਖੇ ਪਰਚਾ ਵੀ ਦਰਜ ਹੋਇਆ ਹੈ । ਜੇ ਬੇਨਤੀ ਕੀਤੀ ਜਾਂਦੀ ਹੈ ਕਿ ਉਕਤ ਰੋੜ ਖੱਡ ਨੂੰ ਨਾ ਚਲਾਇਆ ਜਾਵੇ ਅਤੇ ਇਸ ਖੱਡ ਨੂੰ ਲੋਕ ਜਿੱਤ ਵਿੱਚ ਕੈਸਲ ਕੀਤਾ ਜਾਵੇ ਜੀ ।

ਧੰਨਵਾਦ

Signature
ਸੰਬੰਧਿਤ
ਕ੍ਰਮ ਪੰਚਾਇਤ ਤਲਵੰਡੀ ਚੌਧਰੀਆਂ
ਥਾਣਾ ਸੁਲਤਾਨਪੁਰ ਲੋਧੀ (ਕਪੂਰਥਲਾ)

Signature

Signature
ਮਨਜੀਤ ਸਿੰਘ
ਕ੍ਰਮ ਪੰਚਾਇਤ ਪਿੰਡ ਨਾਲ-
ਥਾਣਾ ਸੁਲਤਾਨਪੁਰ ਲੋਧੀ (ਕਪੂਰਥਲਾ)

Signature
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82888-85385



Ahead of R-Day, patrolling strengthened along LoC

Police verification of Jammu tenants, domestic help must in three days

OUR CORRESPONDENT

JAMMU, JANUARY 11 Patrolling and deployment of troops along the Line of Control (LoC) in J&K have been strengthened ahead of Republic Day, a senior BSF officer said on Wednesday. "Terror outfits always try to carry out violence but jawans are alert on the border. Our endeavour is not to allow infiltration by terrorists," said Ashok Yadav, Inspector General of BSF's Kashmir Frontier.

"Our alertness doubles whenever there is an event like this (Republic Day). We have strengthened our patrolling and deployment. Many of our companies are also deployed for law-and-order duties and the endeavour is to prevent any such incident," he said.

In Jammu, the district administration has issued directions for mandatory verification of tenants and domestic helpers in the backdrop of the Rajouri attack that claimed seven lives barely two weeks ago. Jammu Deputy Commissioner Avny Lavasa stated the Jammu SSP had brought to her notice that there was an imminent need to conduct verification of tenants and domestic helpers as there had been instances of anti-national and anti-social elements seeking hideouts in



Police personnel check commuters ahead of Republic Day in Srinagar on Wednesday. PTI

JUDICIAL PROBE INTO RAJOURI TERROR ATTACK SOUGHT

■ SOS International, an organisation of the Pakistan-occupied Jammu and Kashmir refugees, has demanded a judicial probe into the Rajouri attack that claimed seven lives. ■ The organisation has also demanded Rs 1 crore and a government job to the victims' families. Tributes were paid to victims at an event in Rehari, Jammu.

the residential areas in the guise of tenants.

The order further reads that all property owners should submit the details of the tenants, signed by both owners and tenants, to police stations within three days. The details can be sent in person or through registered post to the SHOs concerned.

Meanwhile, leaders of the refugees, who have migrated from Pakistan occupied J&K (PoJK), have demanded

a judicial probe into the terrorist attack in Dhangri village of Rajouri. They have alleged lapses in sanitisation of victims' houses that led to an IED explosion in one of those houses on January 2, resulting in killing of two minors.

SOS International, an organisation of the PoJK refugees, said a judicial commission, headed by a retired high court judge, should be constituted to fix official

responsibility into the lapses.

Its chairman Rajiv Chuni also said the government should announce Rs 1 crore and a government job to every victim's kin as an ex gratia. An event in Rehari area of Jammu was organised to pay homage to the victims. Jammu Bar Association's general secretary Surjeet Singh Andotra described the killings as shameful act by terrorists.

(With PTI inputs)

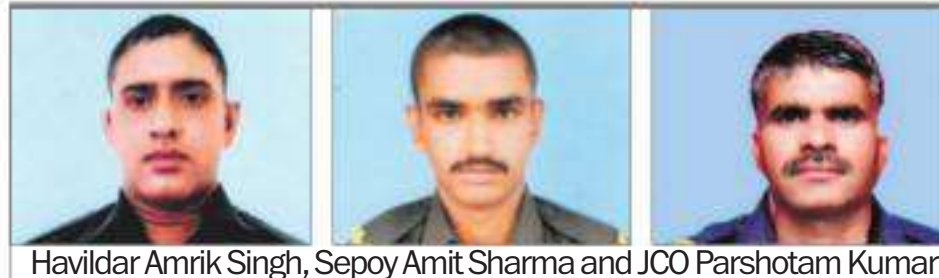
On patrol duty in Kupwara, three soldiers fall to death

SAMAAN LATEEF

SRINAGAR, JANUARY 11 Three soldiers, including a junior commissioned officer (JCO), lost their lives after they slipped into a gorge during patrolling along the Line of Control (LoC) in North Kashmir, officials said on Wednesday. The soldiers were part of a regular operational task in Machil sector of Kupwara when the mishap took place at about 5:30 pm on Tuesday evening.

"While moving towards the forward post, snow along the narrow track broke, leading to the slipping of one the JCOs and two jawans into a deep gorge," said Srinagar-based defence spokesperson Col Emron Musavi.

The Army launched a rescue operation with the help of troops from a nearest post. Sustained efforts of the search party led to the recovery of mortal remains of the three soldiers between 4.15



Havildar Amrik Singh, Sepoy Amit Sharma and JCO Parshotam Kumar

WILL BE REMEMBERED STAND WITH FAMILIES

“Their sacrifice and selfless service to the nation will always be remembered. Manoj Sinha, LG”

“We offer glowing tributes and express sympathies with bereaved families. Ravinder Sharma, CONG LEADER”

am and 4.45 am on Wednesday morning,” the spokesperson said.

The deceased have been identified as JCO Parshotam Kumar, 43, of Majua Uttami village of Jammu, Havildar Amrik Singh, 39, Una and Sepoy Amit Sharma, 23, of Hamirpur districts of Himachal Pradesh. Kumar had joined the Army in 1996. He is survived by his wife and two children. Singh had joined the Army in 2001 and is survived by his wife and a son. Sharma joined the

Army in 2019 and is survived by his mother. The mortal remains will be taken for last rites to their respective native places.

Lieutenant Governor Manoj Sinha tweeted, "Their sacrifice and selfless service to the nation will always be remembered."

Ravinder Sharma, chief spokesperson of the J&K Congress, also expressed grief over the deaths. "We offer glowing tributes to the slain soldiers."

BRIEFLY

Man apprehended with ₹57 lakh in Kupwara

Srinagar: The police have apprehended a man in Kupwara district of Jammu and Kashmir after seizing more than Rs 57 lakh in cash from him. Syed Irfan Abdullah was caught in presence of a magistrate following recovery of Rs 57.43 lakh, which was concealed in a geyser, at Laribal in Kupwara, a police spokesperson said. A case has been registered and investigation initiated, the spokesperson added. PTI

5 clinics sealed for flouting norms in Doda district

Jammu: The health authorities in Doda district have sealed five unauthorised private clinics and laboratories in a crackdown to ensure regulation of the Clinical Establishments Act, 2010. Doda CMO Dr Mohd Yaqoob Mir took action on the directions of the district administration. A team of officials inspected 57 private clinics out of which five were sealed for not having the valid registration documents. oc

Oppn targets admn over power cuts

JAMMU, JANUARY 11 With the government announcing official power curtailment schedule amid peak winter season in Jammu, Opposition parties have come down heavily on the government, mocking its winter preparation claims.

Jammu Power Distribution Corporation Ltd announced a power curtailment schedule that came into effect from Tuesday. Many areas will have over five-hour power cut.

Raqeeq Ahmed Khan, media coordinator of the Apni Party, said power cuts during winter season had made it clear that the administration of J&K was not even able to get adequate electricity from the Centre.

National Conference's (NC) Ramban president Sajjad Shaheen said erratic power supply had been causing several problems to the people.

The Dogra Front and Shiv Sen took out a protest rally in Jammu. It said people were forced to burn wood for keeping their houses warm. — OC

Parl's sovereignty can't be allowed..

FROM PAGE 1

Conference (AIPOC) in Jaipur, said the SC's move to strike down the NJAC Act in 2015 was "a scenario perhaps unparalleled in the democratic history of the world".

Highlighting the importance of "separation of powers" among three pillars of the government enshrined in the Constitution, Dhankhar said parliamentary sovereignty and autonomy were "quintessential for the survival of democracy and cannot be permitted to be compromised by the executive or judiciary".

"The executive is ordained to be in compliance with the constitutional prescription emanating from Parliament. It was obligated to adhere to the NJAC. Judicial verdict cannot run it down," the Vice-President said, referring to the scrapping of the NJAC Act, which was enacted by the NDA government for appointments in higher judiciary.

The Vice-President reiterated his views on the subject against the backdrop of a raging debate on the issue of appointments in higher judiciary. The government has been

questioning the current Collegium system, while the Supreme Court has been defending it. Dhankhar had also flagged this issue during his maiden speech in the Rajya Sabha as its Chairman, saying that a law made unanimously by Parliament should be final.

Referring to a bench of the Supreme Court asking the Attorney General to pass on the message to constitutional authorities to refrain from making statements on the Collegium system, Dhankhar said, "I declined to entertain the Attorney General on this point. I cannot be a party to emasculate the powers of the legislature." "Today this one-upmanship and public posturing from judicial platforms are not good. These institutions must know how to conduct themselves," he said.

Showing his disagreement with the 1973 Kesavananda Bharati judgment, Dhankhar talked about the "basic structure" of the Constitution and said in a democratic society the "basic of any basic structure has to be the supremacy of the mandate of the people". In the Kesavananda

Bharati judgment, the SC barred Parliament from amending the basic structure of Constitution.

On Parliament disruption, Dhankhar said there was "disappointment and anguish" among people at the lack of decorum and discipline during proceedings in Parliament and legislatures.

Meanwhile, Speaker Birla in his address during the inaugural session said the judiciary and legislature should maintain the principle of separation and balance of power. He said the legislatures in India had always respected the powers and authority of the judiciary.

Birla went on to add that the three organs of the government drew their powers and jurisdiction from the Constitution and each of them should work in harmony, trust and balance. He also advised the judiciary "to stay within constitutional limits". Referring to India's G-20 chairmanship, Birla said, "The country will strongly present the theme of its oldest democratic tradition and cultural diversity on the global forum."

VDCs get arms training

JAMMU, JANUARY 11 The Army on Wednesday provided training in handling weapons and their maintenance to Village Defence Committee (VDC) members in remote areas of Makhidhar and Batsiyala in Reasi district.

"In addition, an session on the prevailing security situation and modus operandi of anti-national elements was

organised. Members were educated on desired response mechanism," said Lt Col Devender Anand, Army spokesperson, based in Jammu. He said the initiative of the Army would strengthen its bond with locals and assist in sustained peace in the region. "VDCs play a pivotal role in ensuring peace in the region," he added. — OC

PWD for Vikramaditya, Shandil gets Health..

FROM PAGE 1

Elementary Education and Technical Education and Anirudh Singh Rural Development and Panchayati Raj.

Chauhan has also got Parliamentary Affairs and Ayush; and Vikramaditya Youth Services and Sports. Jal Shakti, Transport and Language, Art and Culture are already with Deputy Chief Minister Mukesh Agnihotri

The ministries were allotted hours after the Sukhu government said it would approve the restoration of the Old Pension Scheme (OPS) in its first Cabinet meeting on January 13. "The Finance Department has worked out a few options in this regard. All these will be discussed and the most suitable option will be approved," said Chauhan.

Besides OPS, the poll promises of granting Rs 1,500 per month to women aged 18-60 and generating one lakh employment opportunities for the youth are likely to be taken up in the meeting. Even as Chauhan claimed the implementation of the OPS would not put any immediate burden on the exchequer, he made it clear that the state was in a deep financial trouble. "We will have to take a loan of Rs 1,000 crore each for the next three months to pay to government employees," he said.

Blaming the previous BJP regime for the current state of affairs (the government inherited a debt of Rs 75,000 crore), Chauhan said the Sukhu government would look to cut down unnecessary expenditure and mobilise more resources for income generation.

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GOVERNMENT OF PUNJAB
Tender Notice Reference No. 32, etender/PHSC/EE(W)/2022-23 dated 06.01.2023
The Department of Punjab Health Systems Corporation invites online bids for the following:

Sr. No.	Name of Work
1.	Repair and Renovation, New Construction, etc at the various Hospitals of Districts Sangrur, Patiala, Mansa, Ferozepur, Moga, Bathinda and Sri Mukatsar Sahib.

Closing Date & Time: 30.01.2023 up to 17:00 hrs
For details login to: eproc.punjab.gov.in
Note: Any corrigendum(s) to the Tender Notice shall be published on the above website only.
Sd/- Executive Engineer (W), PHSC, SAS Nagar.
DPR/Pb/20358

PUBLIC NOTICE

As per the guidelines issued by the Ministry of Environment Forest and Climate Change, Government of India, the KML file of post monsoon survey of District Kapurthala has been prepared and uploaded on District website www.kapurthala.gov.in. For any suggestion or objection in this regard, the office of Executive Engineer-cum-District Mining Officer, Kapurthala, Canal Colony, Jalandhar, Kapurthala Road at Jalandhar can be reached with in one month or E-mail can be sent to xenminingjal@gmail.com.

Sd/- Executive Engineer-cum-District Mining Officer, Kapurthala.
DI-24055

DEPARTMENT OF FORESTS & WILDLIFE CHANDIGARH ADMINISTRATION

Expression of Interest is invited from the eligible and interested Consultant/ consultancy firms/Companies for regarding charges of fee for Engagement of Technical Consultant for Establishment of Climate Resilient Botanical Garden (Eco Park) at Botanical Garden, Sarangpur, Chandigarh. The detailed concept note for Engagement of Technical Consultant can be downloaded from the official website <https://www.chandigarhforest.gov.in> or shall be taken from the office at the address given above below. The interested Consultant/Consultancy firms/Companies are requested to submit their EoI with documentary proof in a sealed cover/electronic mail (email: forestchandigarh@gmail.com) describing "Expression of Interest for Engagement of Technical Consultant/or Establishment of Climate Resilient Botanical Garden (Eco Park) at Botanical Garden, Sarangpur, Chandigarh" in the office of Deputy Conservator of Forest, Chandigarh, 2nd Floor, Paryavaran Bhawan, Sector-19B, Madhya Marg, Chandigarh up to 23.01.2023 up to 1600 hours. The Expression of Interest will be opened in the office room of the Deputy Conservator of Forest, Chandigarh which shall be intimated separately. The Deputy Conservator of Forest, Chandigarh reserves the right to reject any/all the Expression of Interest without assigning any reason, whatsoever.

Deputy Conservator of Forest (BG & NR), Chandigarh Administration.

Off: Paryavaran Bhawan Building (2nd Floor), Sector-19B, Madhya Marg, Chandigarh - 160019
E-mail Address: forestchandigarh@gmail.com Tel: 0172-2700284

GOVT. OF INDIA, MINISTRY OF DEFENCE
OFFICE OF THE CANTONMENT BOARD, JUTOGH
TEHSIL AND DISTRICT SHIMLA (H.P) - 171008
दूरभाष : 0177-2837598 / ईमेल : ceojuto-stabs@nic.in / वेबसाइट : <https://jutogh.cantt.gov.in/>
No. CB/J/81-E/Recruitment/Estt./32 Dated: 11 Jan, 2023

CORRIGENDUM NOTICE
FILLING UP VARIOUS POSTS IN CANTONMENT BOARD JUTOGH
In response to this office employment Notice No. CB/J/81-E/Recruitment/Estt./1056 dated 13.12.2022, there are some changes in the employment notice which are as under:
Last date of submission of online application extended to 03.02.2023.
Age Limit- Age limit for the posts is 21-30 years (age as on 03.02.2023).
Mode of selection- Final selection and merit will be based on written test. The written test will be of 100 marks on the subject of Multiple Choice objective types questions having duration of one and half hours.
The candidate who have already applied in response to the above advertisement need not to apply again.
Sd/- CHIEF EXECUTIVE OFFICER, JUTOGH (R.P. SINGH)
DI-24064

RAIL COACH FACTORY KAPURTHALA
PRADHANMANTRI KAUSHAL VIKAS YOJANA RAIL KAUSHAL VIKAS YOJANA
Notice for the Application of "Rail Kaushal Vikas Yojana" Training Programme under "Pradhan Mantri Kaushal Vikas Yojana"
For the Training in Month of February 2023
Notification No.: RKVY/23/01 Date: 07.01.2023
Ministry of Railways is organising a short-term training programme at nominated Training Centres at all India level for youth under Rail Kaushal Vikas Yojana. This program is entry level skill development training program in various trades i.e. AC Mechanic, Carpenter, CNSS (Communication Network & Surveillance System), Computer Basics, Concrete, Electrical, Electronics & Instrumentation, Filters, Instrument Mechanic (Electrical & Electronics), Machinist, Refrigeration & AC, Technician Mechatronics, Track laying, Welding, Bar Bending and Basics of IT, S&T in Indian Railway. This training will help candidates in getting an employment and becoming self-employed too.
Eligibility- (1) Educational Qualification: Matriculation (10th Standard Pass) (2) Age : 18-35 Years on date of notification (3) Application: Online at www.railkvy.indianrailways.gov.in website from 07.01.2023 (00.00 hrs). Candidate may obtain help in ONLINE submission by same Training Institute in prescribed time. OFFLINE FORM SHALL NOT BE ENTERTAINED. Application is TRADE WISE based on candidates PREFERENCE. (4) Documents required after reporting of Trainees at institute: (i) Photograph and signature (ii) Matriculation mark sheet (iii) Matriculation certificate (In case of D.O.B not mentioned on mark sheet) (iv) Photo identity proof such as Aadhar card, Bank passbook, Ration card, Pan Card. (v) Affidavit on Rs. 10/- Non-Judicial Stamp Paper. (vi) Medical Certificate Instructions for Online submission of application form : All candidates shall fill up the required information in the online form. There is no need to upload any document Online. Application window shall be opened upto 20.01.2023 (23.59 hrs.)
Please visit Website www.railkvy.indianrailways.gov.in for further information please.
General Manager/P
No. G-RCF/122/Misc./120/2022-23 Dated 11/01/2023

CM's threat works.. Golden Globe for..

case and arrest of a PCS officer, Narinder Singh Dhaliwal, last week.

However, the protest withdrawal was not smooth. Though the issue was almost resolved late last night, the PCS Officers Association was to discuss the issue with its members and then decide on the withdrawal of the protest.

However, with Chief Minister Bhagwant Mann tweeting that strict action would be taken against the striking employees if they failed to join duty by 2 pm, followed by a letter from Chief Secretary Vijay Kumar Janjua to all PCS officers, warning them of strict disciplinary action and suspension from service, which could hamper their promotions, the protesting PCS officers felt that in order to build its own image, the government had tried to "defame them".

This led to many officers openly expressing their displeasure, as they converged for a meeting in the Chief Minister's office, and openly aired their views that the protest should continue. "When the CM is listening to their grievances and is assuring that no injustice will be done, why should they go on

leave. We will have to deal with them sternly," the Chief Secretary said.

The president of the PCS Officers Association, Rajat Oberoi, who was originally supposed to meet A Venu Prasad, Additional Chief Secretary to the CM, at 10.30 am, finally met him at noon. He sought time to discuss the issue with other members of their association and the Revenue Officers Association and inform them of the government's proposal to end the stalemate. The government proposed that a committee of officers, both from the civil and police side, headed by the Chief Secretary, would look into the matter of PCS officers Tarsem Chand and Narinder Dhaliwal and Sandeep Kumar (Naib Tehsildar), who, these associations claim, were falsely implicated by the Vigilance Bureau.

A six-member committee of these officers — Rajat Oberoi, Sukhpreet Sidhu, Ankur Mahendroo, Harjit Singh, Sakatkar Singh Bal and Pooja Sayal — then met Prasad and Special Principal Secretary to the CM Ravi Bhagat and the issue was finally resolved.

from "Black Panther: Wakanda Forever", performed by Rihanna, were in the running for the prestigious award.

As "Naatu Naatu" creates history, veteran music director MM Keeravaani, who composed the song, is not the only one overwhelmed by the honour. The entire country from Prime Minister Narendra Modi to superstars Amitabh Bachchan and Shah Rukh Khan to Oscar winner AR Rahman, the first Indian to win the Golden Globe, are rejoicing.

The man behind the award, Keeravaani may not be a household name in this part of the country but the composer of blockbusters like "Baahubali" (part one and two) has delighted us with his melodious compositions in many a Hindi film such as "Jism" and "Paheli". An integral part of Rajamouli's cinema, he goes by the pseudonym MM Kreem in the Hindi film industry. Incidentally, it was Ram Gopal Varma's blockbuster "Kshana Kshanam" (1991) that truly established Keeravaani even though his first break was "Kalki".

Best known for his contribution to the Telugu film industry, the National Award-winning music director has composed for over 200 films

in various Indian languages. Released in five languages, including Hindi, "Naatu Naatu" has been receiving the same frenzied response as the insane energy it whips up.

Apart from being the most viewed song in Telugu with 140 million views, it has the world grooving to it. Needless to say much of the credit for the mass hysteria over the mass anthem goes to the hook steps of enigmatic pair Ram Charan and Jr NTR on whom the song was picturised.

Keeravaani in his acceptance speech has thanked the mega stars as also other members of the team, including singers Kala Bhairava, who happens to be his son, and Rahul Sipligunj and lyricist Chandrabose. Of course, his first vote of thanks went to Rajamouli, "This award belongs to, in order of priority, my brother and the director of this movie, SS Rajamouli, for his vision."

The celebrated filmmaker may have missed the Best Film Non-English Award category for which "RRR" was nominated too. But he has every reason to stand up and break into "Naatu Naatu". Will its infectious energy fetch us an Oscar too? Keep your fingers crossed.

Top 20 percentile students of all boards can apply

undergraduate engineering programmes (BE or BTech) at NITs, IIITs and other institutions funded or recognised by the participating state governments. It is also an eligibility

test for the JEE (Advanced), which is conducted for admission to the IITs. The first round of the JEE (Main) will be conducted between January 24 and January 31.

"For candidates who qualify for admission to the NITs, IIITs and CFTIs, whose admissions are based on the JEE (Main) ranks, they should have secured at least 75%

marks in the Class XII examination or be in the top 20 percentile in the Class XII examination conducted by the respective boards," reads an NTA notification. — TNS

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Sr. No.	Name of Work
1.	Repair and Renovation, New Construction, etc at the various Hospitals of Districts Sangrur, Patiala, Mansa, Ferozepur, Moga, Bathinda and Sri Mukatsar Sahib.

Closing Date & Time: 30.01.2023 up to 17:00 hrs
For details login to: eprnc.punjab.gov.in
Note: Any corrigendum(s) to the Tender Notice shall be published on the above website only.
Sd/- Executive Engineer (W), PHSC, SAS Nagar.

PUBLIC NOTICE
As per the guidelines issued by the Ministry of Environment Forest and Climate Change, Government of India, the KML file of post monsoon survey of District Kapurthala has been prepared and uploaded on District website www.kapurthala.gov.in. For any suggestion or objection in this regard, the office of Executive Engineer-cum-District Mining Officer, Kapurthala, Canal Colony, Jalandhar, Kapurthala Road at Jalandhar can be reached with in one month or E-mail can be sent to xenminingjal@gmail.com.
Sd/- Executive Engineer-cum-District Mining Officer, Kapurthala.

DEPARTMENT OF FORESTS & WILDLIFE CHANDIGARH ADMINISTRATION
Expression of Interest is invited from the eligible and interested Consultant/ consultancy firms/Companies for regarding charges of fee for Engagement of Technical Consultant for Establishment of Climate Resilient Botanical Garden (Eco Park) at Botanical Garden, Sarangpur, Chandigarh. The detailed concept note for Engagement of Technical Consultant can be downloaded from the official website <https://www.chandigarhforest.gov.in> or shall be taken from the office at the address given above below. The interested Consultant/Consultancy firms/Companies are requested to submit their EoI with documentary proof in a sealed cover/electronic mail (email: forestchandigarh@gmail.com) describing "Expression of Interest for Engagement of Technical Consultant/or Establishment of Climate Resilient Botanical Garden (Eco Park) at Botanical Garden, Sarangpur, Chandigarh" in the office of Deputy Conservator of Forest, Chandigarh, 2nd Floor, Paryavaran Bhawan, Sector-19B, Madhya Marg, Chandigarh up to 23.01.2023 up to 1800 hours. The Expression of Interest will be opened in the office room of the Deputy Conservator of Forest, Chandigarh which shall

GOVT. OF INDIA, MINISTRY OF DEFENCE
OFFICE OF THE CANTONMENT BOARD, JUTOGH
TEHSIL AND DISTRICT SHIMLA (H.P.) — 171008
दूरभाष : 0177-2837802 | ईमेल : cebojto-stsb@nic.in | वेबसाइट : [https://jutoogh.cant.gov.in](http://jutoogh.cant.gov.in)
No. CBUMT-01/Recruitment/Est./23 Dated: 11 Jan, 2023

CORRIGENDUM NOTICE
FILLING UP VARIOUS POSTS IN CANTONMENT BOARD JUTOGH
In response to the office employment Notice No. CBUMT-01/Recruitment/Est./1108 dated 13.10.2022, there are some changes in the employment notice which are as under:
Last date of submission of online application extended to 03.02.2023.
Age Limit: Age limit for the posts is 21-35 years (Age as on 03.02.2023)
Mode of selection: Final selection and merit will be based on written test. The written test will be of 100 Marks on the subject of Multiple Choice objective type questions having duration of one and half hours. The candidate who have already applied in response to the above advertisement need not to apply again.
Sd/- CHIEF EXECUTIVE OFFICER, JUTOGH (R.P. SINGH)

RAIL COACH FACTORY KAPURTHALA
PRADHANMANTRI KAUSHAL VIKAS YOJANA RAIL KAUSHAL VIKAS YOJANA
Notice for the Application of "Rail Kaushal Vikas Yojana" Training Programme under 'Pradhan Mantri Kaushal Vikas Yojana'
For the Training in Month of February 2023
Notification No.: RKVY/23/01 Date: 07.01.2023
Ministry of Railways is organising a short-term training programme at nominated Training Centres of all India level for youth under Rail Kaushal Vikas Yojana. This program is entry level skill development training program in various trades i.e. AC Mechanic, Carpenter, CHSS (Communication Network & Surveillance Systems), Computer Basics, Concreting, Electrical, Electronics & Instrumentation, Filters, Instrument Mechanic (Electrical & Electronics), Machinist, Refrigeration & AC, Technician Mechatronics, Track laying, Welding, Bar Bending and Basics of IT, SST in Indian Railways. This training will help candidates in getting an employment and becoming self-employed too.
Eligibility: (1) Educational Qualification : Matriculation (10th Standard Pass)
(2) Age : 18-35 Years on date of notification (3) Application: Online at www.railky.indianrailways.gov.in website from 07.01.2023 (00.00 hrs). Candidate may obtain help in ONLINE submission by same Training Institute in prescribed time. OFFLINE FORM SHALL NOT BE ENTERTAINED. Application is TRADE WISE based on availability. (4) Documents associated after completion of Training at



Annexure K

(Demand & Supply)



A REPORT ON DEMAND AND SUPPLY IN DISTRICT RUPNAGAR (ROPAR)

In compliance with the Supreme Court orders dated 10.11.2021, District Survey Reports (DSR) are being prepared by Sub-Divisional Committees in various Districts in State of Punjab as per Enforcement & Monitoring Sand Mining Guidelines-2020 issued by the Government of India. According to the EMSMG-2020 guidelines, demand, and supply of the riverbed materials through market survey needs to be carried out. In addition to this, riverbed materials demand for the next 5 years needed to be considered.

To evaluate the Demand and Supply of Riverbed Material in the State of Punjab, one Three-member committee has been constituted by office of Superintending Engineer, Patiala Drainage Circle Water Resources Department Punjab vide office letter no. 1558 dated 05.11.2022 as below;

1. Dr. Rajinder Ghai, Executive Engineer
2. Sh. Shyam Verma, Sub Divisional Officer
3. Sh. Navneet Singh, Asst. Design Engineer

The Supply aspects of study shall be catered by District Survey Report as Quantity/Reserves will be there under potential mining sites (proposed) for auctioning/leasing out. Therefore, a separate study of supply of material shall not be required. The supply aspect can be controlled or managed at the level of Water Resources Department (Mines and Geology) Punjab.

For studying demands of materials, various consumers like Roads, Industries, Buildings, Construction related Departments and private individuals are involved. Therefore, a comprehensive study has been done to get reliable /trustworthy data in this regard.

Firstly, the committee decided to adopt *Cement Consumption Methodology* out of two available methodologies (other being *RBI Index Base*



Methodology) in Sand Mining Framework March-2018 to calculate minerals demands in the state of Punjab.

The committee visited various offices like GST Department Punjab Patiala and Director Census, Punjab and hold meeting at Head Office Level on dated 2.12.2022 with various concern Departments in this regard. The cement consumption in State of Punjab has been taken from the information provided by GST Department Punjab vide letter No. FileNo.ET-GST1017/253/2022-PAT-ETC-GST-1 dated 08.12.2022

TABLE 1: CEMENT CONSUMPTION

Sr. No	Year	Quantity of Cement (MT)	Rate of Growth (%age)
(1)	(2)	(3)	(6)
1	2017-18	60,03,928	--
2	2018-19	75,30,208	25.42 %
3	2019-20	75,92,704	0.83 %
4	2020-21	72,52,730	(-) 4.48 %
5	2021-22	1,04,47,711	44.05 %

Source : Office of Taxation Commissioner Punjab Patiala

At Sr. No 4, Growth Rate is (-) 4.48% due to COVID-19 pandemic is ignored, and average growth rate of cement consumption is calculated as 23.43%. In addition to this, a 5% incremental growth is there to this for development of various smart cities projects and rapid urbanisation due to liberal policies in state. Therefore, the committee has taken 28.43% annual growth in cement consumption



Shya

Shya

Shya

Shya

TABLE 2: PROJECTED DEMAND OF SAND

Sr. No	Year	Projected Qty. of Cement (MT)	Conversion Factor	Projected Demand of Sand Qty. (MT)
(1)	(2)	(3)	(4)	(5)
1	2021-22	1,04,47,711	--	2,61,19,277
2	2022-23	1,34,18,462	2.5	3,35,46,155
3	2023-24	1,72,33,929	2.5	4,30,84,823
4	2024-25	2,21,34,305	2.5	5,53,35,762
5	2025-26	2,84,28,076	2.5	7,10,70,190
6	2026-27	3,65,11,447	2.5	9,12,78,618
7	2027-28	4,68,93,282	2.5	11,72,33,204

As in para 5.1.1.3 of *Sand Mining Framework March-2018*, 65% out of total cement consumed across the country is used in Housing Sector, whereas cement consumption is 20% and 15% in Infrastructure and Commercial & Industries Sectors respectively. In the housing sector sand is mostly used with cement and usage of gravel with cement and sand is negligible and hence neglected in calculations. Hence, 35% of total cement used in country is used with Sand and Gravel. Also, Gravel is approximately twice the Quantity of Sand (by weight) used with cement in Infrastructure Sector and Commercial & Industries Sector.

Conversion Factor for Gravel (from Sand)

Proportions of Infrastructure and Commercial & Industries Sectors

$$= 20\% + 15\% = 35\%$$

Factor for Converting Sand into Gravel

$$= 2.0$$

$$\text{Or } \frac{35}{100} \times 2.0 = 0.70$$

100



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TABLE 3: PROJECTED DEMAND OF SAND AND GRAVEL

Sr. No	Year	Projected Demand of Sand Qty. (MT)	Conversion Factor (x 0.7)	Projected Demand of Gravel Qty. (MT)
(1)	(2)	(3)	(4)	(5)
1	2022-23	3,35,46,155	0.70	2,34,82,309
2	2023-24	4,30,84,823	0.70	3,01,59,376
3	2024-25	5,53,35,762	0.70	3,87,35,033
4	2025-26	7,10,70,190	0.70	4,97,49,133
5	2026-27	9,12,78,618	0.70	6,38,95,033
6	2027-28	11,72,33,204	0.70	8,20,63,243

Also, Committee has observed that there have been construction or Infrastructure activities where riverbed materials are required without cement consumption. The committee further explored more sources of Demand where Riverbed Materials is consumed, and cement is not consumed. In recent years, National Highway or Expressways projects across State of Punjab have been undertaken by MORTH under Bharatmala Pariyojana.

To assess approximate overall riverbed materials demand, inclusion of demands from such big projects was required. The information of proposed/yet to be constructed National Highway or Expressways Project in State of Punjab is as shown below;



S.NO.	DESCRIPTION	LANES (NOS.)	LENGTH (IN KM)
NATIONAL EXPRESSWAY 5 (NE-5)			
1	Ghagga (Patiala)-Bhawanigarh (Sangrur)	4	30.90
2	Bhawanigarh (Sangrur)-Bhogiwal (Malerkotla)	4	36.90
3	Bhogiwal (Malerkotla)-Mullanpur Dakha (Ludhiana)	4	35.00
4	Mullanpur Dakha-Nakodar-Kang Sahbu	4	34.00
5	Kang Sahbu (Jalandhar)-Khojewal (Kapurthala)	4	15.50
6	Khojewal (Kapurthala)-Sri Hargobindpur	4	43.00
7	Sri Hargobindpur-Gurdaspur	4	35.30
8	Details awaited (Gursaspur-Balsua)	4	25.80
9	Balsua (Gurdaspur)-Gurah Baildaran (Kathua)	4	44.60
NATIONAL EXPRESSWAY 5A (NE-5A)			
10	Nakodar (Jalandhar)-Dhunda (Tarn Taran)	4	41.00
11	Dhunda (Tarn Taran)-Manawala Khurd (Tarn Taran)	4	30.00
12	Manawala Khurd (Tarn Taran)-Harsha Chhina (Amritsar)	4	28.00
NATIONAL HIGHWAY (NH754 A TO NEE-5A)			
13	Tibba (Kapurthala)-Sangat Kalan (Bathinda)	6	155.00
14	Sangat Kalan (Bathinda)-Lohgarh/ Chautala (Sirsa)	4	30.00
Total Length (KMs)			585

2614 cum per KM per Lane of Riverbed Material is consumed approximately in the above proposed National Highway/ Expressways. The total of 96,97,940 MT of Riverbed Material is required in Two years and 48,48,970 MT is demand annually

As per information provided by Punjab Mandi Board, periodic repair work of Road is undertaken by the Departments in the State . Hence, it can be assumed that at least one time repair work (only bituminous layer) of whole length of Road is done in five years of span by Mandi Board Punjab and PWD B&R Punjab. The demand for such repair work has been calculated accordingly and shown in Table 5 below.



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TABLE 5 : PROJECTED DEMAND OF GRAVEL IN REPAIR WORK OF EXISTED ROADS

SR. NO	YEAR	LANE (NOS.)	LENGT H (KM)	GRAVEL QTY. PER KM PER LANE (CUM)	PROJECTED DEMAND OF GRAVEL QTY. (MT)
(1)	(2)	(3)	(4)	(5)	(6)
1	Length of Existing NH/NE in State of Punjab	4	3501	573	1,12,34,522
2	Length of Existing SH in State of Punjab	4	859	573	27,55,429
3	Length of Existing MDR in State of Punjab	2	1697	573	27,22,667
4	Length of Existing Other Roads in State of Punjab	1.5	4624	573	55,64,420
5	Length of Link Roads under 80 Market Committees fall under the jurisdiction of PWD (B&R) department	1	32890	291	1,33,98,465
6	Length of Link Roads under 74 Market Committees fall under the jurisdiction of Punjab Mandi Board	1	31988	291	1,30,31,016
TOTAL PROJECTED DEMAND (MT)					4,87,06,518

Demand of Riverbed Material (Gravel) as Repair Work is done once in 5 years = 97,41,304 MT

The total Projected Demand of Riverbed Material in Roads becomes,
 = 97,41,304 MT + 48,48,970 MT
 = 1,45,90,240 MT

Hence, annual Demand of Riverbed Material for Roads (where cement is not used or negligible used) becomes 1,45,90,240 MT per Year




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TABLE 6: PROJECTED GROSS DEMAND OF GRAVEL

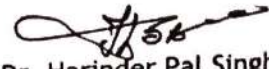
SR. NO	YEAR	PROJECTED DEMAND OF SAND QTY. (MT)	PROJECTED DEMAND OF GRAVEL QTY. (MT) AS PER TABLE 3 & TABLE 5		
			WITH CEMENT	WITHOUT CEMENT	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)
1	2022-23	3,35,46,155	2,34,82,309	1,45,90,240	7,16,18,704
2	2023-24	4,30,84,823	3,01,59,376	1,45,90,240	8,78,34,439
3	2024-25	5,53,35,762	3,87,35,033	1,45,90,240	10,86,61,035
4	2025-26	7,10,70,190	4,97,49,133	1,45,90,240	13,54,09,563
5	2026-27	9,12,78,618	6,38,95,033	1,45,90,240	16,97,63,891
6	2027-28	11,72,33,204	8,20,63,243	1,45,90,240	21,38,86,687

The above report has been submitted with recommendation for requirement of evaluate the Demand and Supply of Riverbed Material for the purpose of preparation of District Survey Reports in the State of Punjab as per the Enforcement and Monitoring Guidelines for Sand Mining, 2022.


 Er. Shyam Verma)
 Sub Divisional Officer
 Morinda, Ropar Division


 (Er. Navneet Singh)
 Assistant Design Engineer
 Mining Head Office


 (Dr. Rajinder Ghai)
 Executive Engineer-cum-
 District Mining Officer,
 Mohali


 (Dr. Harinder Pal Singh Bedi)
 Superintending Engineer
 Drainage Circle Patiala



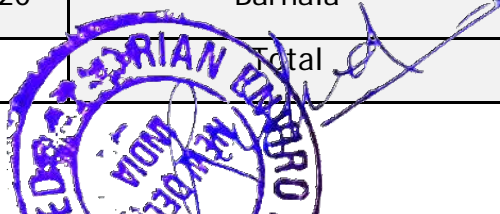
Projected Demand of Gravel (in MT) District wise

Sr.No.	District Name	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1	Ludhiana	9031904	11076885	13703347	17076630	21409087	26973456
2	Amritsar	6429564	7885330	9755036	12156383	15240540	19201661
3	Gurdaspur	5933061	7276410	9001734	11217645	14063638	17718873
4	Jalandhar	5662695	6944829	8591531	10706464	13422767	16911436
5	Firozpur	5238002	6423977	7947179	9903496	12416080	15643104
6	Patiala	4893664	6001676	7424745	9252456	11599867	14614752
7	Sangrur	4272776	5240207	6482723	8078542	10128123	12760491
8	Hoshiarpur	4095831	5023199	6214260	7743992	9708696	12232052
9	Bathinda	3584441	4396022	5438371	6777107	8496505	10704805
10	Tarn Taran	2890288	3544700	4385191	5464671	6851095	8631741
11	Moga	2570492	3152497	3899992	4860033	6093056	7676683
12	Sahibzada Ajit Singh Nagar	2567606	3148958	3895613	4854576	6086215	7668064
13	Muktsar	2328221	2855371	3532414	4401970	5518780	6953148
14	Kapurthala	2104335	2580793	3192730	3978668	4988084	6284521
15	Mansa	1987092	2437005	3014848	3756997	4710173	5934379
16	Rupnagar	1767347	2167505	2681447	3341524	4189292	5278118
17	Faridkot	1594081	1955009	2418565	3013930	3778585	4760665
18	Shahid Bhagat Singh Nagar	1580662	1938552	2398206	2988560	3746778	4720591
19	Fatehgarh Sahib	1549305	1900095	2350630	2929273	3672449	4626944
20	Barnala	1537337	1885418	2332473	2906646	3644081	4591203
	Totat	71618704	87834439	108661035	135409563	169763891	213886687



Projected Demand of Sand (in MT) District wise

Sr.No.	District Name	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1	Ludhiana	4230538	5433468	6978446	8962730	11511234	14784392
2	Amritsar	3011603	3867937	4967764	6380321	8194531	10524602
3	Gurdaspur	2779042	3569247	4584144	5887621	7561734	9711873
4	Jalandhar	2652403	3406599	4375248	5619326	7217151	9269309
5	Firozpur	2453477	3151109	4047111	5197885	6675876	8574125
6	Patiala	2292189	2943961	3781060	4856184	6237014	8010476
7	Sangrur	2001365	2570443	3301334	4240051	5445687	6994139
8	Hoshiarpur	1918485	2463995	3164619	4064462	5220170	6704497
9	Bathinda	1678950	2156350	2769497	3556989	4568399	5867399
10	Tarn Taran	1353809	1738757	2233164	2868152	3683695	4731134
11	Moga	1204017	1546373	1986075	2550805	3276113	4207659
12	Sahibzada Ajit Singh Nagar	1202665	1544636	1983846	2547941	3272435	4202934
13	Muktsar	1090537	1400626	1798886	2310390	2967337	3811083
14	Kapurthala	985669	1265939	1625902	2088218	2681992	3444602
15	Mansa	930753	1195407	1535315	1971873	2532565	3252686
16	Rupnagar	827824	1063211	1365530	1753811	2252498	2892983
17	Faridkot	746666	958977	1231657	1581872	2031669	2609363
18	Shahid Bhagat Singh Nagar	740381	950905	1221289	1568556	2014567	2587398
19	Fatehgarh Sahib	725694	932041	1197061	1537439	1974602	2536069
20	Barnala	720088	924841	1187815	1525563	1959349	2516479
	Total	33546154	43084823	55335762	71070190	91278618	117233204



Annexure L
(Executive Summary)



DISTRICT SURVEY REPORT OF KAPURTHALA DISTRICT, PUNJAB

Executive Summary

The purpose of District Survey Report (DSR) is to identify the mining potential areas where mining can be allowed; and to distinguish areas where mining will not be allowed due to proximity to infrastructural structures and installations, areas of erosion, areas of environmental sensitivities etc. The DSR would also help to estimate the annual rate of replenishment wherever applicable.

The district survey report of Ludhiana district is prepared by **SUBDIVISIONAL LEVEL COMMITTEES OF KAPURTHALA DISTRICT** and assisted by RIAN ENVIRO PRIVATE LIMITED, Sheikhpura, Patna, Bihar.

Methodology for the preparation of DSR:

For the preparation of DSR, there are two types of data is being used – Field Data and Secondary data.

Secondary data was collected from the different district departments like District Administration, Forest department, Irrigation department, Revenue department, Mining department etc. All the data has been reviewed, selected, and collated to prepare an authentic and reliable District Survey Report. Besides this, procedure as defined in the MoEF & CC Notification dated 25.07.2018 and as per the model DSR has been followed for preparing the various chapters of this District Survey Report.

Field data was collected two times during pre-monsoon and post-monsoon for determining the replenishment rate and identification of minor mineral potential sites.

Chapters included in District Survey Report, Kapurthala:

The district survey report of Kapurthala district includes Introduction, Overview of Mining activities in the District, Process of Deposition of Sediments in the rivers of the District, General Profile of the district, Physiography of the District, Geology and Mineral Wealth, Estimation of deposits and Replenishment Studies, Transport, Remedial measure to mitigate the impact of mining etc. The main objective of DSR is to find minor mineral potential zones which helps in increasing district's revenue while taking into consideration the environmental sustainability of sites.

The DSR of Kapurthala includes minor mineral riverbed potential zones in table no 7.7 (Page no. 57) and include a localized replenishment study which is discussed in chapter 7 (Page no. 44 to 58) The consolidated detail of riverbed/desilting/agriculture sites is attached at **Annexure - A**.

General Information of the district:

The Kapurthala District is one of the sub-Districts forming the Jalandhar Division. This is the only District in the state which is split in to two parts some 32 Kilometers apart. Between the two parts is the territory of Jalandhar District. It is the smallest District in terms of area and population. The district has area of 1,633 Kilometers. The district which lies between the latitudes of 30 degree 07 minutes 30 second and 31 degree 39 minutes 30 seconds North and longitudes of 75 degree 58 minutes 30 seconds and 75 degree 54 minutes 60 seconds East forms a part of Bist Doab in central Punjab. In the north, it is bound by the District of Hoshiarpur and Gurdaspur, in the west, by the river Beas and District Amritsar in the south by the river Sutlej and Jalandhar and Ferozepur and in the east by Jalandhar and Hoshiarpur Districts. The Phagwara sub-division is surrounded on all sides by Jalandhar District except in the North East where it joins the District of Hoshiarpur.

The Deputy Commissioner has overall charge of the district, and is the hub of the district administration. For administrative purposes, the Deputy Commissioner, Ludhiana, has to play triple role as Deputy Commissioner, as District Collector and as District Magistrate. In his/her multifarious



DISTRICT SURVEY REPORT OF KAPURTHALA DISTRICT, PUNJAB

duties, the Deputy Commissioner is assisted by the following officers for carrying out day to day work in various fields: -

1. Additional Deputy Commissioner
2. Assistant Commissioner (General)
3. Assistant Commissioner (Grievances)
4. Executive Magistrate
5. District Revenue Officer
6. District Development and Panchayat Officer
7. Sub Divisional Magistrates
8. Civil Defense Officer
9. Urban Ceiling Officer

The Deputy Commissioner is the Chief Revenue Officer as District Collector and is responsible for collection of Revenue and other Govt. dues recoverable as arrears of Land Revenue. He/She deals with the Natural Calamities like draught, unseasonal rains, hailstorms, floods and fire etc.

Administratively the District is divided into four Sub-division\Tehsils namely Kapurthala, Sultanpur Lodhi, Bholath and Phagwara. Kapurthala town is the headquarters of the district. There are 688 inhabited villages and 6 towns. The villages are covered by 5 Community Development Blocks with headquarters at Kapurthala, Nadala, Sultanpur Lodhi, Dhilwan and Phagwara.

The following Sub-Division Level Committees have been constituted in district Kapurthala for the preparation of DSR.

Kapurthala Sub-Division	Sultanpur Lodhi Sub-Division	Bholath Sub-Division	Phagwara Sub-Division
Sub- Division Magistrate Kapurthala- Chairperson	Sub- Division Magistrate Sultanpur Lodhi - Chairperson	Sub- Division Magistrate Bholath- Chairperson	Sub- Division Magistrate Phagwara - Chairperson
Environment Engineer/XEN PPCB, Jalandhar- Member	Environment Engineer/XEN PPCB, Jalandhar- Member	Environment Engineer/XEN PPCB, Jalandhar- Member	Environment Engineer/XEN PPCB, Jalandhar- Member
Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) – Member	Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) – Member	Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) – Member	Executive Engineer, Irrigation, (Bist Doab Division, Jalandhar) – Member
Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member	Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member	Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member	Executive Engineer, Const. Div. No. 1, PWD (B &R), Kapurthala- Member



DISTRICT SURVEY REPORT OF KAPURTHALA DISTRICT, PUNJAB

Kapurthala Sub-Division	Sultanpur Lodhi Sub- Division	Bholath Sub-Division	Phagwara Sub-Division
Executive Engineer, Jalandhar Drainage Division Jalandhar- Member	Executive Engineer, Jalandhar Drainage Division Jalandhar- Member	Executive Engineer, Jalandhar Drainage Division Jalandhar- Member	Executive Engineer, Jalandhar Drainage Division Jalandhar- Member
Divisional Forest Officer, Phillaur Jalandhar- Member	Divisional Forest Officer, Phillaur Jalandhar- Member	Divisional Forest Officer, Phillaur Jalandhar- Member	Divisional Forest Officer, Phillaur Jalandhar- Member
Chief Agriculture Officer, Kapurthala- Member	Chief Agriculture Officer, Kapurthala- Member	Chief Agriculture Officer, Kapurthala- Member	Chief Agriculture Officer, Kapurthala- Member
All Block Development and Panchayat Officer, Kapurthala- Member	All Block Development and Panchayat Officer, Sultanpur Lodhi - Member	All Block Development and Panchayat Officer, Bholath - Member	All Block Development and Panchayat Officer, Phagwara - Member
District Mining Officer, Kapurthala- Member Secretary	District Mining Officer, Kapurthala- Member Secretary	District Mining Officer, Kapurthala- Member Secretary	District Mining Officer, Kapurthala- Member Secretary

Methodology used to identify potential riverbed:

- With the help of recent satellite imagery (United State Geographical Survey, Landsat 8-9– 2 Satellite Image, Resolution – 30 m, Date – Oct 2022), river stretch and potential sand zones for the district were identified.
- Field survey along with DGPS was conducted to identify the riverbed potential zone coordinate and depth of deposition during pre- and post-monsoon.
- After that the concerned sub-divisional committee visit was conducted for finalizing the deposition zones/pockets.
- With the comments/remarks, all the finalized zones/pockets/blocks were included in DSR and put on Public Domain for the period of one month on dated 14/12/2022.
- There are no any comments received from public /various stakeholder on Public domain till date regarding the DSR uploaded on public portal.

Potential riverbed and agriculture mining site for the district:

Altogether **13** riverbed mining sites are finalized for the district Kapurthala and these 13 riverbed sites cover **45.66 Ha**. The total minable mineral quantity for the district is approximately **1782200.76 MT** & Considering 60% as per EMGSM, 2020 is approximately **1069320.456 MT**.

1 riverbed mining site which is non- replenish are finalized for the district Kapurthala and these 1 riverbed sites cover **4.07 Ha**. The total minable mineral quantity for the district is approximately **1,53,357.6 MT** & Considering 60% as per EMGSM, 2020 is approximately **92,014.56 MT**.



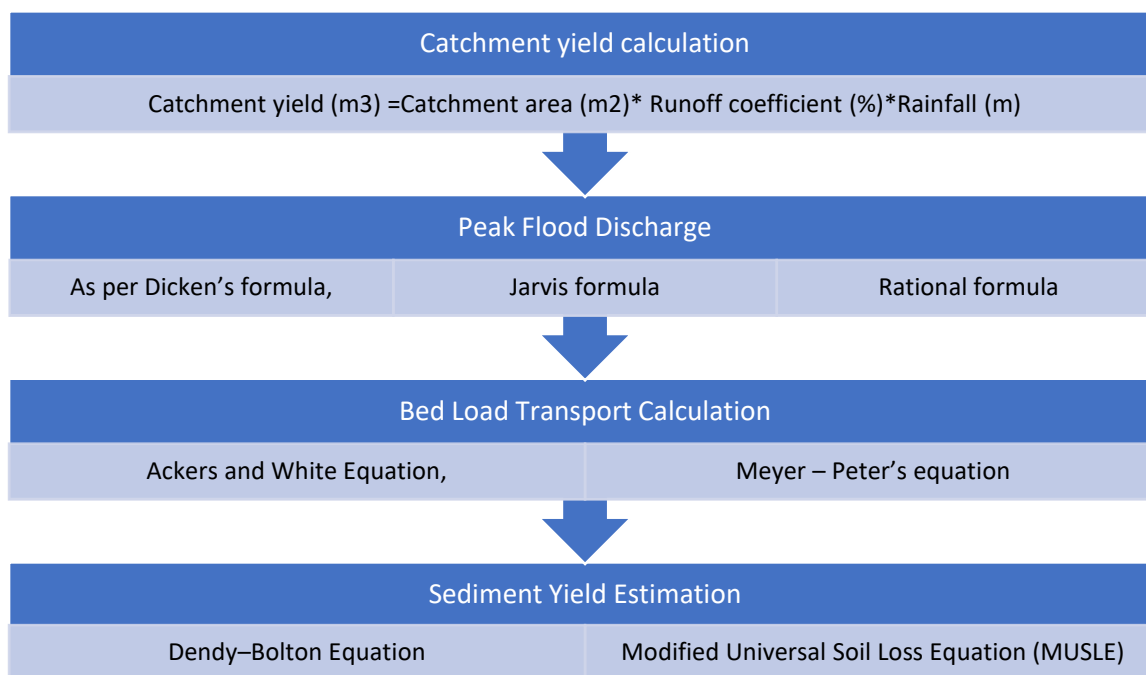
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Methodology adopted to calculate Replenishment Rate for the District, Kapurthala:

The replenishment rate is the frequency at which river sand is introduced into a river channel that is being studied or having sand extracted from it. This volume is frequently considered as the river's sustainable production. One of the most challenging tasks in sediment budgeting is the estimation of river sand flow via stream bed and its residence period (temporary deposition), as this needs advanced equipment and the deployment of numerous gauging stations. It is obvious that during high flow periods, river sand that is typically carried via siltation (i.e., partially suspended and partially bed load) will be entirely in suspension in the overlying waters.

The replenishment estimation based on a theoretical empirical formula with the estimation of bed-load transport comprising of analytical models to calculate the replenishment estimation. Replenishment study based on satellite imagery involves demarcation of sand bars potential for riverbed mining. Both pre and post monsoon images need to be analyzed to established potential sand bars.

The process of calculation of replenishment rate along with deposition is calculated based on below mentioned attributes:



The district Kapurthala has mainly one river i.e. Beas and the calculation of Total mineable mineral potential are shown below:

- a. Sediment load comparison between Pre and Post Monsoon period for rivers of Kapurthala district

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River Name	Pre-Monsoon no of ghats	Post-Monsoon no of ghats	Pre-Monsoon Sediment Load (Mcum)	Post Monsoon Sediment Load (Mcum)	Variance (Mcum)
Beas	22	41	4.83	4.29	0.54

b. Replenishment rate estimation as per empirical formula

Location	River Name	Lease Area	Surface RL Before mining	Mine out Thickness	Mine out Volume	Annual Rainfall-2020	Estimated Replenished Volume as per Dandy-Bolton
		m ²	m	m	cum	m	cum
Beas	Safderpur	42900	217.00	2.00	85800.00	0.71	61776.00

c. Total mineable mineral potential

Sl. No.	River or Stream	Potential area (sq.m)	Potential area (Ha.)	Average Mining Thickness	Volume in MCum	60% of Volume in MCum	Bulk Density g/cc	Mineable Mineral Potential Million (MT)
1	Beas	13,91,800	139.18	3	4.18	2.51	1.56	3.92

All the above-mentioned hypothetical formulas have some limitations. Dandy - Bolton may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning but it does not differentiate in basin wide smaller streams and their characteristics. MUSLE includes only one type of sediment yield (sheet and rill Erosion).

It is observed that the replenishment or sediment deposition study can be done with theoretical and analytical models of bed load transport. However, these models present a more of a generic picture, while actual replenishment is characteristic for each river uniquely. Thus, direct field study is required to get a clear picture about actual replenishment in the river. For this replenishment and sediment yields will be studied for the coming years preferably both pre and post monsoon periods i.e. during months of May-June and October-November. Data derived from this study will be analyzed and regression or correlation will be developed with theoretical models so that a 'river specific' relation can be established using both analytical approach and actual field data.

This will ensure that the effect of influencing variables like climate, drainage pattern, soil geology, topography, vegetation, land use, geographic location etc. are well accounted for.

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Annexure -A

Source	No. of proposed sites	Area (Ha)	Total excavation in Tonnes	Total excavation in Tonnes (Considering 60% as per EMGSM, 2020)
River bed (Proposed)	14	45.66	19,35,558.36	1161335.02
River bed (Existing)	5	21.67	802945	-
Agriculture land, pattas etc. (Proposed)	NA	NA	NA	NA
Agriculture land, pattas etc. (Existing)	01	3.8	171000	-
Desilting sites (ponds, lakes, dams etc.) (Proposed)	NA	NA	NA	NA
Desilting sites (ponds, lakes, dams etc.) (Existing)	02	80.85	-	-
M-sand	NA	NA	NA	NA
Total (Proposed Riverbed)	14	45.66	1935558.36	1161335.02
Clusters (Riverbed) proposed	3	11.93	539106.6	323463.96

