बिहार सरकार,
खान एवं भूतत्व विभाग।

पत्रांक– 218 /एम0, पटना, दिनांक– 12/1/2020

प्रेषक,

मो0 मोईज उद्दीन,
संयुक्त सचिव।

सेवा में,

Email

MAA LAXMI CREATIVE PRIVATE LIMITED,
Dir.- CHUNCHUN KUMAR & Others,
S/o.- Lt. Anandi Singh,
Address- TUNGI, HISUA, NAWADA, Bihar- 805129.
Email- maalaxmi47@gmail.com

विषयः– **नवादा जिलान्तर्गत बालूखण्ड– 22 (परोरिया बालूघाट) के खनन योजना के अनुमोदन के संबंध में।**

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि बिहार बालू खनन नीति–2019 यथा संशोधित एवं बिहार खनिज (समानुदान अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 (यथा संशोधित 2021) के नियम–17 में वर्णित प्रावधानों के तहत् **नवादा जिलान्तर्गत बालूखण्ड– 22 (परोरिया बालूघाट)** से संबंधित समर्पित खनन योजना के अनुमोदन पर प्राधिकृत समिति द्वारा समीक्षा की गई। समीक्षोपरांत निम्न शर्त्तों एवं बंधेजों के तहत् खनन योजना अनुमोदित की जाती है –

1. उक्त खनन योजना केन्द्र सरकार/राज्य सरकार द्वारा विनियमित अन्य सभी अधिनियम/ नियमावली में वर्णित प्रावधानों को तथा किसी न्यायालय/अन्य न्यायिक संस्था द्वारा पारित किये गये न्यायादेश को बिना प्रभावित किये अनुमोदित किया जा सकता है।
2. उक्त खनन योजना का अनुमोदन खान एवं खनिज (विकास एवं विनियमन) अधिनियम, 1957 (यथा संशोधित), बिहार खनिज (समानुदान अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 के नियम–17, वन संरक्षण अधिनियम, 1980, पर्यावरण सुरक्षा अधिनियम, 1986, श्रम संबंधी नियम, EMGSM 2020 तथा अन्य सभी सुसंगत अधिनियम/ नियमावली तथा उनमें वर्णित प्रावधानों के प्रतिकूल नही होगा। लीज के रकवा के अनुसार प्रति हेक्टेयर कम से कम 10 पौधा लगाना होगा तथा 50 प्रतिशत Survival सुनिश्चित करना होगा।
3. खनन योजना में निहित शर्त्तों का पालन करते हुए ही बालू खनिज का खनन् तथा प्रेषण किया जायेगा।
4. संबंधित सक्षम प्राधिकार से यथा वांछित प्रमाण--पत्र प्राप्त कर विभाग को अवगत कराना अनिवार्य होगा।
5. यदि किसी भी समय खनन योजना में वर्णित शर्त्तों के अनुपालन में अनियमितता पायी जाती है, तो खनन पदाधिकारी को नियमानुसार आवश्यक कार्रवाई करने का अधिकार होगा।
6. संबंधित बालूघाट में खनिज की उपलब्धता, पहुँच पथ का निर्माण तथा अन्य खनन् कार्यों से संबंधित सम्पूर्ण जबाबदेही बालूघाट संचालनकर्त्ता की होगी तथा इसमें किसी भी तरह का कोई दावा अथवा क्षतिपूर्ति मान्य नहीं होगा।
7. खनन योजना मे वर्णित सभी तकनीकि तथा अन्य बिन्दुओं से संबंधित ऑकड़ों की सत्यता / वैधता की जिम्मेवारी RQP/बंदोबस्तधारी की होगी तथा भविष्य में उपर्युक्त के संबंध में किसी प्रकार की भिन्नता/अनियमितता की पूरी जबावदेही RQP/बंदोबस्तधारी की होगी।

P.T.O.

MINING PLAN

WITH

PROGRESSIVE MINE CLOSURE PLAN

Submitted under Rule (17) of Bihar Minerals (concession, prevention of illegal transportation & storage) Rules 2019

APPROVED
Vide Dept. of Mines & Geology
Govt. of Bihar, Patna
Letter No. 218 ..... Dt. 12/01/2023

OF

BLOCK- 22 (PARORIYA) SAND GHAT (TILAIYA RIVER)

Mauja– Paroriya, Block– Meskaur,

Dist- Nawada, (Bihar).

APPLIED AREA- 6.58 HECTARES

PLAN PERIOD: FOR FIVE YEARS

DEPARTMENT MINES AND GEOLOGY, GOVT. OF BIHAR * PATNA *

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DEPARTMENT OF MINES AND GEOLOGY, GOVT. OF BIHAR • PATNA •

LIST OF ANNEXURES

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2	COPY OF RQP CERTIFICATE

LIST OF PLATES

PLATE NO.	LIST OF PLATES
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8	ENVIRONMENT MANAGEMENT PLAN
9	PROGRESSIVE MINE CLOSURE PLAN

MINING PLAN

MINES AND GEOLOGY, GOVT. OF BIHAR
PATNA

PART A
CHAPTER–1

1. INTRODUCTION

1.1	Settlee Name & Full address Phone. No. E-mail ID	Maa Laxmi Creative Private Limited Dir.- Chunchun Kumar & Others S/O.- Lt. Anandi Singh, Address- Tungi, Hisua, Nawada, Bihar- 805129. 9931251147 maalaxmi47@gmail.com
1.2	Letter no. / date of lease execution & lease period	District Mining office issue LOI on letter no. 3511/khanan dated. 07.12.2022 for a period of 05 years (Annexure No. -1)
1.3	Settlee post/social status	Private
1.4	Mineral or Minerals which the Settlee intends to mine	Sand
1.5	Applied area for mining lease	Block- 22 (Paroriya) Sand Ghat Lease has an applied area of 6.58 Hectare.
1.6	Name & address of RQP & Regd. No. Mobile No. E-mail ID	Er. Pravin Kr Sinha Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019 **Consultant :** P & M Solution 201,Mangal Market Raja Bazar, Patna (Bihar) 9889024004 & 7542949027 indusminingbihar@gmail.com
1.7	RQP Certificate	RQP certificate copy attached as **Annexure 2**
1.8	Name of the Prospecting agency	The base data is collected from various geological reports of the Department of Mines & Geology and local authorities as well as detailed prospecting of the area is carried out by the RQP.
1.9	Status of Environmental clearance	After Mining Plan approval then Settlee shall submit application to state Environment Impact Assessment Authority (SEIAA) of Bihar for environment clearance.
2.0	Date of Survey	30.12.2022

Maa Laxmi Creative Pvt. Ltd.
Director Director

CHAPTER–2

2. PROJECT DESCRIPTION

2.1 JUSTIFICATION OF PROJECT

Sand is a ubiquitous material; available everywhere and is being used from the time immemorial for wide applications in our daily life; infrastructures, building construction, highways, roads, townships, multiplexes, foundations of buildings and industrial units etc. and is an integral part of development. Over the millennia, the weathering effect, the flow of water at high velocities in rivers and the pressure of water from the high mountainous reservoirs converted and pushed the hard ground underneath into sand, etc. which travelled as sediments with the flow. Huge amount of sand get deposited along the river course wherever conditions were favorable. As a result of continuous deposit of sand, the rivers may change their course, by widening itself and expanding, can result in flooding, inundation and breaking their banks, may cause devastation of property and loss of life. The rivers thus, needed channelization and therefore, extraction of sand through mining was expedient. The haphazard mining of sand being practiced now for long, through unregulated, uncontrolled and illegal way added almost an irreversible damage to the environment, which became a cause of serious concern to everyone. Though sand is a very important mineral source for development, its mining through scientific methods has also become equally imperative.

It is for this purpose that 'mining plan' is being drawn so that all its aspects are taken care of justifiably, according to law, protecting the environment, removing all adverse impacts and creating a direct and indirect employment opportunities, improving socio-economic conditions of the local inhabitants and all-around status of life, achieving thereby a sustainable development.

Besides the above, the process of mining of minor minerals (Sand) is a constant source of revenue generation to the State Government through Royalty.

Maa Laxmi Creative Pvt. Ltd.
Director

2.2 BACKGROUND OF THE PROJECT

The Department of Mines & Geology, Bihar required under Bihar Minerals (Concession, Prevention of Illegal Mining, Transportation & Storage) Rules, 2019 & Bihar Sand Mining Policy, 2019. The general conditions of mining lease for minor minerals are mentioned here below:

- First the State Government shall identify the areas which are suitable for river bed mining based on quantity of the minor minerals available and suitable from ecological and environmental aspects as well.
- Under rule 17 (4) Approval and submission of Mining Plan - All Mineral Concession Holders or the Government/Corporation as the case may be shall submit a mining Plan duly prepared by an RQP and approved by the Director or any officer / person/academic institution/Govt. agency authorized by the Department in this regard within a period of three months from the date on which communication regarding grant of mineral concession is received or such other period as may be decided/ allowed by the department for the submission of the approved Mining Plan.
- While preparing the mining plan, proper attention has been paid to ensure that the relevant provisions under MMDR Act-1957, MMR-1961, Mines Act-1952 & Mines Rules-1955, Sustainable Sand Mining Guidelines – 2016 and Enforcement & Monitoring Guidelines for sand Mining - 2020 have been followed. All safety measures, provided in the statue, will be taken into consideration. On 17.09.2019 Bihar Government took its policy decision vides notification no. – 4/V.Mu-20-93 / 18-3174 /M . That all Mining Lessee / Settlee under rule 17 of the said Rules, the lessee shall submit the mining plan with Progressive Mine closure plan for approval to the competent officer , Department of Mines & Geology, Bihar
- Mining operation to be in accordance with Environmental clearance.
- For baseline, data assistance has been taken from the data, available from local authorities.

2.3 RESTRICTED AREAS FOR SAND QUARRYING

i. The quarrying of sand shall be prohibited within up to a distance of 1 kilometre (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.

ii. No quarrying shall be permitted within 50 (fifty) meters of any public place i.e. cremation Ghat or any religious place etc.

iii. No quarrying shall be allowed to be extracted where erosion may occur, such as at the concave bank.

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iv. The quarrying of sand shall be prohibited within 100 (one hundred) meters upstream and downstream from any dam/weir or any other structure erected for irrigation purpose.

v. Sand Ghats should preferably be located on the river side embankment. For low embankment less than 6 meters height, quarrying should not be done within 25 meter from toe/heel of the embankment and depth of mining should not be more than 2.0 meter. In case of higher embankments, the distance should not be less than 50 meter and depth of mining should be maximum 1.50 meter and at a distance of 75 meter of more mining depth should be maximum 2.0 meter. In order to obviate the development of flow parallel to embankment, crossbars of width eight times the depth of mining pits spaced at 50 to 60 meters center to center should be left in the mining pits.

vi. The irrigation outlet shall be maintained at the same level as that of the river bed and in no case, the river bed level shall be permitted to be below the irrigation outlet level. No quarrying shall be permitted around the infiltration well/intake well up to a distance of 5 meters.

vii. No quarrying of sand shall be permitted in any private land owned by a person other than a settlee unless the settlee obtains the consent of the concerned land owner/raiyat.

viii. No quarrying of sand shall be permitted in any area which the State Government notifies as restricted area.

ix. Mining depth should be restricted to 2 meters and distance from the bank should be ¼th or river width and should not be less than 7.5 meters.

x. Demarcation of mining area with pillars and geo-referencing should be done prior to the start of mining.

xi. A buffer distance /un-mined block of 50 meters after every block of 1000 meters over which mining is undertaken or at such distance as may be the directed/prescribed by the regulatory authority shall be maintained.

xii. River bed sand mining shall be restricted within the central 3/4th width of the river/rivulet or 7.5 meters (inward) from river banks but up to 10% of the width of the river, as the case may be and decided by regulatory authority while granting environmental clearance in consultation with irrigation department. Regulating authority while regulating the zone of river bed mining shall ensure that the objective to minimize the effects of riverbank erosion and consequential channel migration are achieved to the extent possible. In general, the area for removal of minerals shall not exceed 60% of the mine lease area, and any deviation or relaxation in this regard shall be adequately supported by the scientific report.

Maa Laxmi Creative Pvt. Ltd.

Director

CHAPTER–3

3. LOCATION, GENERAL AND ACCESSIBILITY

3.1 LOCATION

(a) Details of the area

(i)	**Lease-hold area**	6.58 Hect.		
	Location	The Block- 22 (Paroriya) Sand Ghat fall in Mauja– Paroriya, Block– Meskaur, Dist- Nawada, (Bihar). The location plan is enclosed (Plate No. 1)		
(ii)	**Mining Lease Map**	Khesra No.- 121 Khata No. - 347 Thana No.- 39 Google Map of Block- 22 (Paroriya) Sand Ghat is attached as **Annexure no. 3.**		
(iii)	**District & State**	Nawada, Bihar		
(iv)	**Mining Plot**	**Sand Ghat**	**River**	**Area (ha)**
		Block- 22 (Paroriya) Sand Ghat	Tilaiya	6.58
		Total		**6.58**
(v)	**Name of Ghat**	Block- 22 (Paroriya) Sand Ghat of 6.58 hectares.		
(vi)	**Ghat details**	6.58 ha (Tilaiya River bed)		
(vii)	**Coordinates**	The area & geographical coordinates of Block- 22 (Paroriya) Sand Ghat is given in **Table No.1** **Toposheet No. – 72H/5 & 72H/6**		

BLOCK- 22 (PARORIYA) SAND GHAT CO-ORDINATES

S. No	Sand Ghat	Area (in Ha)	Co-ordinates		Ghat/Village	River
1	Block- 22 (Paroriya) Sand Ghat	6.58	A	24°43'13.01"N 85°23'1.72"E	Mauja– Paroriya, Block– Meskaur, Dist- Nawada, (Bihar).	Tilaiya
			B	24°43'12.67"N 85°23'3.51"E		
			C	24°43'34.93"N 85°23'6.37"E		
			D	24°43'33.51"N 85°23'9.09"E		

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Director

(b) Key plan of area:-

Key plan of Block- 22 (Paroriya) Sand Ghat (Tilaiya River) is attached as **Plate-2.**

Total mining area is completely outside of any restricted or protected area by any state or central government.

3.2 GENERAL

(a) Mineral being worked	Sand
(b) Period of Mining Lease	The lease period has been granted for Five years.
(c) Category of Land used	The mining area is inactive channel of riverbed
(d) Relief of Plot	Block- 22 (Paroriya) Sand Ghat (112.0 ASML to 110.6 ASML)
(e) Existing pits	As the mining area is of river bed and it will be replenished every year no pits will be formed..
(f) Type of lease area:	Total area is almost hundred percent river bed flood plain land & it is free from forest land.
(g) Present land use pattern:	The existing land use is given below:

Sr. No.	Land use	River bed (Ha)	Forest Land (Ha)	Barren land (Ha)	Grazing Land (Ha)
1	Mining pits Quarry	-	-	-	-
2	Approach Road	-	-		-
3	Dumps	-	-	-	-
4	Office, Resht Shelter etc.	-	-	-	-
5	Balance undisturbed land	6.58	-	-	-
	Total	6.58	-	-	

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Director
Director

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3.3 ACCESSIBILITY

Nawada is located between North Latitudes 24° 31': 25° 08' and East Longitudes 85° 00': 86° 03' and falls on Survey of India Degree sheet No. 72 H & 72 G. The district is bounded in north by Nalanda and Sheikhpura district, in east by Jamui district, in west by Gaya district, while southern half boundary of district is bounded by Jharkhand state boundary. The district is having a geographical area of 2494 Sq. Km and occupying 1.43% of the total geographical area of the Bihar State.

The city is well connected to all other parts of the state by roadways and railways. The renamed north-south National Highway NH 20, which is part of the Asian Highway Network and AH42 runs through Nawada and connects Nawada to major cities like Kolkata, Asansol, Ranchi, Jamshedpur, Bokaro, Dhanbad, Bihar Sharif and Patna. State Highway 8 runs through Nawada and connects it to other important parts of the district like Hisua, Pakri Barawan and Warisaliganj, and to the neighbouring district Jamui SH-28. The city is also connected by the Indian Railway B.G. line, through the Gaya–Kiul line of the East Central Railway. The city is served by a direct daily train to Howrah and a weekly service to Guwahati via Bhagalpur. The state capital Patna can be reached through a stop-over at Patna Railway Station or Gaya Railway Station from where rest of India is well connected.

Project site is falls in Mauja Paroriya. Site is well connected by Paroriya -Village road which is at distance of approx. 1 km in NE direction. Nearest NH/SH is SH-70 at approx. 7 Km in SW direction. Nearest railway station is Tilaiya Junction Railway Station at distance of approx. 11 km in NE. Nearest airport is International Airport Patna at distance of approx. 101.30 km in NW.

Maa Lakshmi Creative Pvt. Ltd.
Director

CHAPTER-4

4.1 GEOLOGY & EXPLORATION

Topography and general geology and local / mine geology of the mineral deposit including drainage pattern

The Nawada District comprises of two distinct landscapes i.e Plain land of North and the hilly area of the south. 45% comes under the plain land which is used for agricultural purposes. Nawada is a perfect combination of natural scenery combined with panoramic views, Nalanda known for its glorious past lies on the northern side of Nawada while Hazaribagh is located in its south. In the east lies Giridih, a very beautiful and holy place and finally in the west lies Gaya. Therefore, geographically it is clear that Nawada is surrounded by all these place which are hold great historical and geographical importance.

General Geology

The main geological formation in the area is pre-Cambrian rocks of Archaean age. The crystalline rocks in the district are mica schist, granite gneiss, quartzites & quartz schist, hornblende schist & mica pegmatites etc. These rock types constitutes the hill ranges &cover south and eastern parts of Rajauli blocks,southern parts of sirdala block north central & southern parts of Dhanwara blocks & south, south-eastern & northern parts of kauakol block.

Availability of Mineral resources in Nawada district:-

The mineral resources of Nawada district playing massive role in industrial, social and economic development of the district.

Available mineral resources in the district

- ✓ Sand
- ✓ Sandstones
- ✓ Quartzite
- ✓ Mica

Regional Geology

Geologically, it represents nearly two third of Bihar is under cover of Ganga basin composed of alluvium and masks the nature of basement rocks.

Maa Lakshmi Creative Pvt. Ltd.
Director

Showing the Geological Succession and their Occurrences distribution

Age	Geology	Occurrences
Quaternary	Alluvial Deposits (Sand, Clay, Silt, Fragments)	North Bihar Plain & Central Bihar Plain
Tertiary	Sand Stones & Clay Stones	North Champaran Hills
Gondwana	Coal Measures, Forming a series of Small outlier basins	Banka District
Vindhyans	Sandstones, Shales, Limestones, etc.	Parts of Bahbhua and Rohtas dist
Satpura	Schist, Phyllite, Quartzite	Part of Aurangabad, Gaya, Nawada, Nalanda, Sheikhpura and Munger District
Proterozoic	Mica Schist, amphibolites, quartzite, granite, dolerite and pegmatite	Nawada, Jamui and Banka
Archaean	Gneisses, Granites, Schists, Phyllites, quartzite, amphibolites & intrusive all metamorphosed sedimentary and igneous rocks	Part of Aurangabad, Gaya, Nawada, Jamui, Banka and Bhagalpur

4.1.3 GEOLOGY OF THE AREA

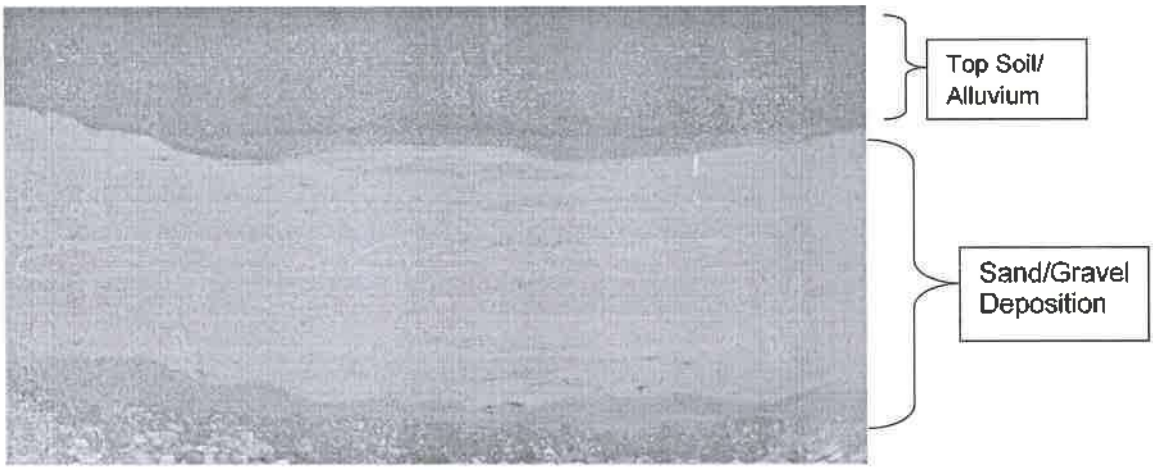
The area of the district falls in the Zone-III B, South West Alluvial Plain agro climatic zone of Bihar. The district of Nawada does not have any important perennial river. The topography of the district is plain and border area adjoining Jharkhand is rocky terrain & mountains. The area is dominated by medium to fine sand geologically the area comprising of Terrace alluvium deposited in depositional terraces of old rivers & contain cyclic sequence of fine to course grained sand. It is angular to subangular and the angularity of the grains of this category of sand decreases with depth. The Litho unit shown on the geological map of the leased out area have been plotted on the basis of physical characteristics observed in the field. Sand and silt are deposited in the middle of the river whereas fine sand and soil are deposited at the fringe of the river banks. Soil/ alluvium varying in thickness from 0.20m to 0.60m m constitute the top horizons in the area suitable for agriculture. River

Prepared by: Pravin K. Sinha Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019

Mahalaxmi Creative Pvt. Ltd.
Director

Sakari, Dhadhar, Nati, Khuri, Tilaiya & Dhanarjay meanders through the area exposing the alluvium and soil at the banks.

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The size of the sediments towards the source i.e. host rock is course and at the tale end of the river the grain size is reduced to smaller sizes resulted in the formation of clay beds. The following sequences have been observed in the area, i.e. Top soil/ Alluvium followed by sand deposition (as shown in the figure below).



Sand and silt are deposited in the middle of the river whereas fine sand and soil are deposited at the fringe of the riverbanks.

Soil/ alluvium varying in thickness from 0.20m to 0.60m m constitute the top horizons in the area suitable for agriculture. River Sakari, Dhadhar, Nati, Khuri, Tilaiya & Dhanarjay meanders through the area exposing the alluvium and soil at the banks. Sand is found in the river bed upto a depth of more than 2.0 m. The major part of bed remains dry as water flows in a single stream during the non-monsoon seasons. Only during rainy seasons the entire flood plain has water, when there will be no mining done.

4.2 ORIGIN & CONTROL OF MINERALIZATION (ANNUAL REPLENISHMENT OF MINERAL IN RIVER BED AREA/SEDIMENTATION)

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined river sand is a product of natural weathering of rocks over a period of millions of years and these materials get collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

The factors which affects the "Computation of Sediment":

Geomorphology & Drainage Pattern: The following geomorphic units plays important role:

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un-dissected pediment

b) Distribution of Basin Area River wise

c) Drainage System/Pattern of the area, Rainfall & Climate: Year wise Rainfall data for previous 10 years .

e) As per Dandy & Bolton study "Sediment Yield" can be related to

i) Catchment Area and

ii) Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

Sand mining has become a widely spread activity and does not require a huge set up or technology, the number of ventures has increased extensively and it has become a footloose industry in itself but the backward-forward linkages are becoming stronger as many are getting employed as well as the construction activity / industry requires this mineral at consistent rates. Riverine environmental systems are unique in themselves and provide environmental services, natural resources to meet variety of needs of urban and rural communities.

4.2.1 REPLENISHMENT STUDY OF MINED AREA OF TILAIYA RIVER:-

Replenishment Rate is the rate at which Bajri is transported into the river channel, which is under examination or subjected to sand extraction. This volume is often considered as sustainable yield of that river. Estimation of Bajri discharge through stream bed and its residence period (temporary deposition) is one of the most difficult task in sediment budgeting.

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The rate of gross or absolute silt production (erosion) in the watershed and the ability of the stream system to transport the eroded material in a river and then to a reservoir has the direct relation with the quantity of sediment delivered into a reservoir. It has been observed that the average rate of sediment production decreases as the size of drainage area increase and the larger watershed the lesser is the variation between the rates. The larger watershed presents more opportunity for deposition of silt during its traverse from the point of production. The total amount of eroded material, which reaches a particular hydraulic control point, is termed as sediment yield. The sediment control of inflow is governed by Character of run-off; Susceptibility of soils; the extent and density of vegetative cover in the area; and the hydraulic efficiency of the drainage system.

This report quantifies the annual replenishment of bed material in the Tilaiya River during periods of sediment transport at high flows within the mined area. It provides estimates of the amounts of sand & bajri which will be used in construction and for other uses.

4.2.2. METHODOLOGY FOR REPLENISHMENT STUDY:-

The methodology used for Replenishment study is based on the measurement of volumetric survey at selected points as monitoring stations within the lease area in Pre-monsoon season & Post Monsoon season respectively. For the said project replenishment study has been done during the post-monsoon season has done by field survey (volumetric survey) method. Firstly Volumetric Survey was done in the proposed mining block. By this method spot RL/level are marked & mapped and sections are drawn for several monitoring locations within the mine area. After that, for post-monsoon season again spot RL/level are marked & mapped on the same location and sections are drawn. The RL(m) observed during Pre-monsoon season of all locations.

Table 7. Volumetric survey measurement

Classification	Code	Quantity of Sand
A) Mineral Reserves		Cum
1) Proved Mineral Reserves	111	131600
Total		**131600**

Replenished quantity of sand = 131600 cum. or 236880 tonnes.

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Director

4.3 EXPLORATION

Mining of sand is being done since long time therefore no specific method of exploration is required as the sand, deposited all along the bed and its pale channels, which is very well exposed on the surface. The minerals excavated from the river bed will be replenished gradually during the monsoon season every year. And the area pertaining to paleochannels of the river will be leveled & restored back. Adequate quantity of Sand in reserves is available for meeting consumer demand.

4.4 MINERAL RESERVES

The Mineral reserves have been estimated as per the Indian Standard Procedures. The area of the mining lease is 6.58 Hectares and the average thickness of the river bed minerals estimated as 2.0 mt.

4.4.1 PARAMETERS OF RESERVE ESTIMATION:

The geological reserves have been estimated as per UNFC guidelines in all the three axis.

Economic Axis (E-1): The Sand is exists with in the entire stretch & having no problem selling in the market. The road is near the Ghat & sand shall loaded into tipper with the deployment of an excavator & transport to various parties. The land is State Govt. land & State Govt. has given its consent for the exploitation of Sand on their expensive land. On the feasibility study, economic viability of deposit has been established sand in economic viable, therefore economic axis has been considered as E-1.

Feasibility Status (F-1): Feasibility study has been carried out & is considered to be feasibility status. A feasibility study provides a preliminary assessment with a level of confidence as compared to that of feasibility study. It has been revealed that exploitation of sand is feasible & economic viable & feasibility axis under UNFC code has been considered as F-1:

Geological Axis: The exposure of sand is seen in the entire stretch & thickness of sand varies 2.5m to 3.0m. Therefore geological axis has been considered as G-1.

Geological Reserves

The geological reserves have been each stretches & for individual blocks. Geological reserves have been completed through cross sectional area method. The area of each section line is multiplied by strike influence to get the volume.

i) **Proved Mineral Reserves (111):** All quantities of sand occurring upto depth of 2 m from surface has been considered as proved reserves.

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Director
Director

Classification	Code	Quantity of Sand
A) Mineral Reserves		Cum
1) Proved Mineral Reserves	111	131600
Total		**131600**

Total Geological Reserve = **131600 cum. or 236880 tonnes.**

*Bulk density is 1.80 g/cm^3

4.4.2 MINEABLE RESERVES:

Mineable reserves have been computed up to 2m depth from surface. Benches having height 1.5m & width 6.0m drawn from the ultimate pit limit. Area of each benches have been calculated multiplied by strike influence to get the volume. The volume multiplied by bulk density (1.80 g/cm3) to get the tonnage.

The minerals excavated from the river bed will be replenished gradually during the monsoon season every year. And the area pertaining to paleochannels of the river will be leveled & restored back.

Table-4.4:- Summary of mineable reserves of Sand Ghat as below:

BLOCK- 22 (PARORIYA) SAND GHAT OF TILAIYA RIVER

The mineable reserves are given in **Table Nos.4**

Bench Level (mRL)	Length (m)	Width (m)	Depth (m)	Volume (cum)	Tonnes
112 - 111	661	84	1	55524	99943
111 - 110	651	74	1	48174	86713
Total				103698	186656

Total Mineable Reserve = 103698 CUM or 186656 Tonnes

- Mineable reserve has been consider 60% approx. of geological reserve after applying the guideline of Enforcement & Monitoring Guidelines for Sand Mining 2020.
- The proposed production grant in **LOI is 78960** cum per year which is within the sustainable limit of mineable reserve.
- The BD for Sand has been adopted at 1.80 g/cm3 [Noida Testing Laboratories]

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Director

Director

- **CLASSIFICATION MINERAL RESERVES:**

Sand Ghat	Area (Hect)	Geological Reserves (m3)	Mineable Reserves (m3)	Annual Permitted Reserve As per LoI (m3)
Block- 22 (Paroriya) Sand Ghat	6.58	131600	103698	78960

The annual extractable RBM comes to 78960 CUM or 142128 Tonnes. It will be replenished after rainy season every year.

4.5 LIFE OF MINE

There is as such no specific life of the mine as the area under reference is inactive part of river bed of the river and its pale channels and whatever quantity of minor minerals are extracted from the Applied Area during five year; almost equal to extracted quantity of the same are replenished every year and the river bed area will be leveled & restored back. However, as lease has been granted for 5 years, mining will be done for the allotted time.

CHAPTER – 5

5.0 MINING

- Mining will be done as per the guidelines of Bihar Mineral (Concession Prevention of illegal Mining Transportation & Storage) Rules, 2019.
- This is an open-cast mining project. The operation will be semi-mechanized/OTFM with use of excavators/JCBs truck /tractors combination or Manually etc. The sand will be collected in its existing form.
- Sand Mining will be carried out only upto a depth of 2 m bgl or above ground water level (whichever is less), for river bed block.
- No drilling /blasting are required as the material is loose in nature.
- Proper benching of 1.5 m height and 6m width will be maintained for mining blocks as per guideline M.M.R-2019, under rule 115(1).
- Mining will be done only during the day time and completely stopped during the monsoon season.

Restriction on mining:

i) Sand and gravel shall not be extracted up to a distance of 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 side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side.

ii) No quarrying shall be permitted within 50 (fifty) metres of any public place i.e. cremation Ghat or any religious place etc.

iii) No quarrying shall be permitted within 5 (five) metres from both banks of the river.

iv) The quarrying of sand shall be prohibited within 100 (one hundred) metres upstream and downstream from any dam/weir or any other structure erected for irrigation purpose.

v) Sand Ghats should preferably be located on the river side embankment. For low embankment less than 6 metres height, quarrying should not be done within 25 metre from toe/heel of the embankment and depth of mining should not be more than 2.00 metre. In case of higher embankments, the distance should not be less than 50 metre and depth of mining should be maximum 1.50 metre and at a distance of 75 metre of more mining depth should be maximum 2.00 metre. In order to obviate the development of flow parallel to embankment, crossbars of width eight times the depth of mining pits spaced at 50 to 60 metres center to center should be left in the mining pits.

vi) The irrigation outlet shall be maintained at the same level as that of the river bed and in no case the river bed level shall be permitted to be below the irrigation outlet level. No quarrying shall be permitted around the infiltration well/intake well up to a distance of 5 meters.

vii) The extraction of sand shall be permitted only after obtaining a No Objection Certificate from the Water Resources Department in the case of rivers where from irrigation channels are out flowing.

viii) No quarrying of sand shall be permitted in any private land owned by a person other than the settlee unless the settle obtains the consent of the concerned land owner/raiyat.

ix) No quarrying of sand shall be permitted in any area which the State Government notifies as a restricted area.

x) Sand and gravel shall not be allowed to be extracted where erosion may occur, such as at the concave bank.

xi) Mining depth should be restricted to 2 meters and distance from the bank should be ¼th or river width and should not be less than 7.5 meters.

5.2.1 PROPOSED METHOD OF MINING:

- Mining activity will be carried out by open cast manual/Mechanically method.
- No OB/ waste material will be produced in river bed. The sand shall be exploited upto depth of 2.0 m only through the formation of bench height 1.0m & width 6.0m. An approach road having width 6.0m & gradient 1:12 shall be provided for the movement of loading machineries & transportation of sand. The sand shall be exploited with the deployment of an excavator & filled into Tractors/Trucks & transported to various buyers.
- No drilling/ blasting are required as the material is loose in nature.
- Proper benching of 1.0 m height will be maintained.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the applied area for the movement of loaded tractors/ trucks will not have slopes more than 1 in 16.
- The mined out area shall be replenished each year during monsoon period and maintained in maximum original topography.
- Approach roads from the various blocks as already described earlier will be merging with permanent tar roads on both sides of the river for transportation of the mineral to final destinations.
- The Sand transportation shall be insured after the covering the vehicle Tarpaulin.

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5.3 YEAR WISE PRODUCTION SCHEDULE:

The annual exploitation of sand from Block- 22 (Paroriya) Sand Ghat are given below :-

YEAR	Over burden (cum)	ROM Sand (cum)	Saleable Sand (cum)
1ST	-	**78960**	**78960**
2ND	-	**78960**	**78960**
3RD	-	**78960**	**78960**
4TH	-	**78960**	**78960**
5TH	-	**78960**	**78960**

The annual extractable RBM comes to **78960 CUM or 142128 Tonnes.** It will be replenished after rainy season every year.

5.4 CONCEPTUAL MINING PLAN

Mine Applied Area will be worked for Block- 22 (Paroriya) Sand Ghat. However, as the digging depth will be restricted to 2.0 m only. This will be further replenished during rainy season. Sand Ghat will be worked systematically as the width is limited while length is much more. As the lease period is only 5 (Five) years, some of the area will be left un-worked at the end of lease period.

(i) Final Slope Angle to Be Adopted: Height of the bench is limited to 1.0 m while width of individual bench shall be kept 6.0m. River bank side will be protected by working in dry part of the river and by leaving safety distance of the width of the river of 5 meter. Bank side natural slope will not be disturbed. This will prevent collapse of bank and erosion. However, the height of the bank with respect to river bed is varying from 3-4 meters.

(ii) During plan period workings will be carried out in the Sand Ghat at a time of the Applied Area simultaneously. Scattered workings will ensure safety, remove congestion of vehicles and will have better control and management.

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(iii)Ultimate Capacity of Dumps: There will be no OB removal / during the plan period. Therefore no proposal has been envisaged for its separate dumping. No outside material will be filled up in the extracted zone.

The **conceptual plan** & section of each mining plots are attached with mine plan.

5.5 EXTENT OF MECHANIZATION:

The operation will be done by semi mechanized method / OTFM.

Following table gives the list of equipment to be used:

Table-5.2:- List of Equipment's to be used

S. No.	Name of machinery	Capacity	Fuel Consumption	No. of Machinery
1	JCB	1.00 m^3	10 Ltr/hr	1
2	Excavator	2.0 m^3	16 Ltr/hr	1
3	Trucks	12 tonnes	4 Ltr/hr	34
4	Tractors	04 Tonnes	2 Ltr/hr	43
5	Water Tanker	4000 liter	4 Ltr/hr	1
6	Light vehicles	As per requirement	4 Ltr/hr	1

5.6 QUANTITY OF HSD/ FUEL CONSUMPTION PER DAY

Table-5.3:- Quantity of HSD/Fuel to be used

S. No	Machine	Details of fuel (Diesel) requirements	Consumption of Diesel (in lits/ day.)
1.	Excavator & JCB	Number of Excavator & JCB = 1&1 Diesel consumption by 1 jcb & 1 Excavators m/c in one shift working.(i.e-10/15 litre/hr) =1*8*10= 80 liters &	208 liters

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		1*8*16= 128 liters	
2	Tippers/Tractors	Number of Tractors & Trucks = 43 & 34 Diesel consumption by 34 trucks & 43 Tractors in one shift working (i.e-4ltr/hr.) & (i.e-2 ltr/hr.) =43*2*8 = 688 =34*4*8= 1088	1776 liters
3	Water Sprinkler	Number of Sprinkler=01 Diesel consumption by Sprinkler in one shift working.(i.e-4ltr/hr). =1*10*4=40 liters.	40 liters
3	Extra	Transport vehicle, super vision vehicle, maintenance vehicle	50 liters
			Total=2074 liters

5.7 MINERAL PRODUCTION

The mining will be confined to excavation of sand to an extent depending upon availability and market demand. Production is taken tentatively upto a maximum of **142128 TPA** as per marked demand.

CHAPTER –6

6.0 DRILLING AND BLASTING

No drilling and blasting shall be required to for the exploitation of river sand.

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CHAPTER–7

7.0 MINE DRAINAGE:

a) LIKELY DEPTH OF WATER TABLE BASED ON OBSERVATIONS FROM NEARBY WELLS AND WATER BODIES:

As per the proposed mining, the working shall be confined up to 2.0 m or above the ground water table whichever comes first. Hence no water is likely to be encountered. So there is no need of any such arrangements.

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Director

CHAPTER–8

8.0 DISPOSAL OF WASTE MATERIAL

No waste as such will be generated at the site as all materials are saleable. If, at all silt clay will be generated along with the minerals will be used to dispose off in the low lying areas as spread, where plantation will be done after spreading top soil on it.

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Director Director

CHAPTER–9

9.0 USE OF MINERALS

Sand has become a very important mineral for expansion of our society due to its many uses. It can be used for making concrete, filling roads, building sites, brick-making, making glass, sandpapers, reclamations, and etc.

Prepared by: Praveen Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019

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Director Director

CHAPTER – 10

10.0 OTHERS

10.1 HAULAGE AND SURFACE TRANSPORT

Mode of transportation of material is by trucks/ Tractors of size of 12 tonnes / 4 tonns capacity have been planned.

Mining area is connected with an unmetalled (approach) road upto the nearest village and thereafter it is metalled road connected to State/National highway. The mine road is adequate to permit easy maneuverability of trucks allowing cross overs and changing points. Water is sprayed two times in a day by tractor mounted water sprinklers until dust remains airborne.

10.2 SITE SERVICES:

A temporary rest shelter will be provided for the workers near to the site for rest.

Provisions will also be made for following in the rest shelter:

- First aid box along with anti-venoms to counteract poison produced by certain Snakes / Reptiles, if any.
- Sanitation facility i.e. septic tank or community toilet facility will be provided for the workers.
- Canteen will be made available near the sites.

10.3 WATER REQUIREMENT

Total water requirement for the project is 4.0 KLD, its breakup is as under:-

Table: 10.1- Water Requirement of the proposed project

S.No.	Purpose	Water Requirement (KLD)
1.	Dust Suppression	2.0
2.	Domestic	1.0
3.	Green Belt	1,0
Total		4.0

Director Director

10.4 EMPLOYMENT:

The manpower requirement for the proposed project is tabulated below. This manpower is the permanent resource which excludes personnel's coming along with trucks / Tractors.

Table 10.2:- Man power distribution of the proposed project

S. No.	Category	Numbers
1.	Administration	1
2.	Supervisor	1
3.	Skilled	03
4.	Un-skilled	20
TOTAL		**25**

The maximum annual production envisaged is **142128 TPA** which will be achieved every year that implies about 569 tonnes per day. 250-working days in a year. That implies 25 workers will meet the required production.

SAFETY PROVISION:

All provisions in safety rules & regulation will be maintained by providing required materials to the employees. The lessee will provide safety shoes, safety helmets to all the employees. There will be no violation of safety provisions.

Prepared by: Pravin Kr Sinha Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019
Maa Laxmi Creative Pvt. Ltd.
Director Director

CHAPTER–11

11.0 MINERAL BENEFICIATION

Mineral Sand doesn't require processing or beneficiation. The excavated mineral will be directly loaded into the trucks.

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Director Director

CHAPTER –12

12.0 ENVIRONMENT MANAGEMENT PLAN

12.1 SOLID WASTE MANAGEMENT

In this if top soil will be generated, will be used for purposed of applied for green belt development. Small amount of domestic waste will be generated by the workers at the site, which will be disposed off through proper municipal way. No other waste generation is expected.

12.2 PLANTATION

The area of the proposed project lies in the river bed and devoid of any forest land.

Mining activities in River Bed blocks will not cause any harm to riparian or aquatic vegetation as mining will be only in the dry river bed portions of the river leaving safety distance from the bank. Hence it proposed to plant trees along the banks (wherever possible), along the haul road sides or near the civic amenities in consultation with village authority/local bodies.

In river bed mining cases plantation will be done at the river banks. It is proposed to have plantation along the haul road sides on both sides to provide cover against dust emission and also to act as noise absorber. Plantation will also be carried out as social forestry programme in villages, school/ and the areas allocated by the village authority/local bodies. Every year 14 trees of will be planted with various types of species. List of species is recommended for plantation.

Native plants like Mango, Neem, Kadamb, Kathal, Peepal, Gulmohar, and other local species will selected in suitable combination, so that can grow fast and also have good leaf cover. It is proposed to plant.

12.3 ENVIRONMENT MANAGEMENT PLAN

1.	Top soil storage, preservation and utilization	Present mining area is river bed, therefore no generally no top soil is present, if found then quantities of top soil to be generated will be stacked separately, preserved and used for purposed of plantation therefore no proposal has been envisage for storage, preservation & utilization.
2.	Waste dump management	No waste will be generated during mining whatever material is collected is transported in its original shape. Hence no waste management is required. Small amount of domestic waste is expected, which will be disposed off in a proper way. No

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Maa Laxmi Creative Pvt. Ltd.

Director Director

		waste will be thrown into the streams or left on the banks.
3.	Plantation programme	Plantation will be done along both sides of roads and civic amenities in consultation with the local authorities. social forestry programme will also be conducted in the nearby villages.
4.	Quality of air	24 hourly samples twice a week for one month in each season except monsoon will be collected at the mine site and nearby villages and analyzed.
5.	Noise	Excavators used for mining & transportation vehicles used for dispatch of minerals are source of noise pollution at mine site. Hence periodical noise monitoring will be done. Ear muffs/protective equipments will also be provided for safety of the workers.
6.	Quality and make of water including surface and ground water	Mining will not have any impact on surface and ground water, however monitoring of parameters will be done once in each season.
7.	Soil	No major impact on soil due to mining operations is expected. Soil parameters will be monitored once in two years.
8.	Topography & drainage	Mined out area will be replenished every year during monsoon period in each stretches in each block in case of river bed blocks. Hence as such no topographical impact will be seen. A buffer zone will be left on either side of banks as safety measure. There is no stream crossing through the applied area which would show impact on drainage pattern.
9.	Local transport infrastructure	Trucks/dumpers are main vehicles running on the road for mineral transportation. The present road network is adequate to handle the load of this project. Water sprinkling on the haul roads/link roads will be done two times in a day to keep the dust suppressed. Also proper parking and traffic management will be followed.

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CHAPTER– 13

CONCLUSION:

The proposed project involves collection of sand from inactive channel of river bed of Tilaiya river. Safety distance will be left intact to avoid bank erosion. Mining activity will be done except monsoon season. All necessary measures will be taken care to save environment and for safety purposes. Besides this extraction of sand every year will reduce the chance of flood level by removing the deposited mineral. This is very essential in order to prevent widening of the riverbeds and to prevent flooding off and damage to the adjoining areas. The sand extracted is in high demand in the local market which is used in making bridges, road & Building Material, etc.

This project operation will provide livelihood to the poorest section of the society. It provides employment to the people residing in vicinity directly or indirectly by the project. After all the proposed project will increase developmental activities and employment opportunities.

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Maa Laxmi Creative Pvt. Ltd.

Director

PROGRASIVE MINE CLOSURE PLAN

PROGRESSIVE MINE CLOSURE PLAN

1.0. INTRODUCTION:

1.1	Settlee Name & Full address Phone. No. E-mail ID	Maa Laxmi Creative Private Limited Dir.- Chunchun Kumar & Others S/O.- Lt. Anandi Singh, Address- Tungi, Hisua, Nawada, Bihar- 805129. 9931251147 maalaxmi47@gmail.com
1.2	Letter no. / date of lease execution & lease period	District Mining office issue LOI on letter no. 3511/khanan dated. 07.12.2022 for a period of 05 years (Annexure No. -1)
1.3	Settlee post/social status	Private
1.4	Mineral or Minerals which the Settlee intends to mine	Sand
1.5	Applied area for mining lease	Block- 22 (Paroriya) Sand Ghat Lease has an applied area of 6.58 Hectare.
1.6	Name & address of RQP & Regd. No. Mobile No. E-mail ID	Er. Pravin Kr Sinha Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019 **Consultant :** P & M Solution 201,Mangal Market Raja Bazar, Patna (Bihar) 9889024004 & 7542949027 indusminingbihar@gmail.com
1.7	RQP Certificate	RQP certificate copy attached as **Annexure 2**
1.8	Name of the Prospecting agency	The base data is collected from various geological reports of the Department of Mines & Geology and local authorities as well as detailed prospecting of the area is carried out by the RQP.
1.9	Status of Environmental clearance	After Mining Plan approval then Settlee shall submit application to state Environment Impact Assessment Authority (SEIAA) of Bihar for environment clearance.
2.0	Date of Survey	30.12.2022

Prepared by: Pravin Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3825 Dated 07/11/2019

Maa Laxmi Creative Pvt. Ltd.

Director Director

a). **Location:** Block- 22 (Paroriya) Sand Ghat fall in Mauja– Paroriya, Block– Meskaur, Dist- Nawada, (Bihar). The location plan is enclosed **(Plate No. 1)**

b). **Extent of Lease area:** **6.58 Hectares**

c). **Type of lease area:** Total area is waste land & it is free from forest land

d). **Present land use pattern:** The existing land use is given below:

Sr. No.	Land use	River bed (Ha)	Forest Land (Ha)	Barren land (Ha)	Grazing Land (Ha)
1	Mining pits Quarry	-	-	-	-
2	Approach Road	-	-		-
3	Dumps	-	-	-	-
4	Office, Resht Shelter etc.	-	-	-	-
5	Balance undisturbed land	6.58	-	-	-
	Total	**6.58**	-	-	-

e). **Method of mining and mineral processing:**

- Mining will be done as per the guidelines of Bihar Mineral (Concession Prevention of illegal Mining Transportation & Storage) Rules, 2019.
- This is an open-cast mining project. The operation will be semi-mechanized/OTFM with use of excavators/JCBs truck tractors combination etc. The sand will be collected in its existing form.
- Sand Mining will be carried out only upto a depth of 3 m bgl or above ground water level (whichever is less), for river bed block.
- No drilling /blasting are required as the material is loose in nature.
- Proper benching of 1.5 m height and 6m width will be maintained for mining blocks as per guideline M.M.R-2019, under rule 115(1).
- Mining will be done only during the day time and completely stopped during the monsoon season.

1.1. Reasons for Closure:

The "closure plan is a plan by which reinstate condition can be created, so that justification to the mother earth can be done" said by **James E. Hansen**. In the case of river bed mining, the excavated sand gets replenished during every monsoon and the area pertaining to palaeo channels of the river will be levelled & restored back to its original topography. More or less, the river bed maintains its previous form, such that the main stream of river remains unchanged.

According to experience and rough estimation of the State Government whatever quantity of minor minerals is extracted from the said area during the year will be replenished every year by the River itself on account of its flow and velocity.

At present there is no foreseeable reason regarding closure of mine. The progressive mine closure plan is being submitted.

1.3. Closure plan preparation:

a). Name and address of the Lessee:

Maa Laxmi Creative Private Limited
Dir.- Chunchun Kumar & Others
S/O.- Lt. Anandi Singh,
Address- Tungi, Hisua, Nawada, Bihar- 805129.
9931251147
maalaxmi47@gmail.com

b). Name, address & Registration No. of R. Q. P.

Er. Pravin Kr Sinha
Reg. No. - RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019
Consultant :
P & M Solution
201,Mangal Market
Raja Bazar, Patna (Bihar)
9889024004 & 7542949027
Email ID: indusminingbihar@gmail.com

c). Name of the executing agency:

The Proponent shall execute himself the provision of mine closure plan.

Maa Laxmi Creative Pvt. Ltd.

Prepared by: Pravin Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3825 Dated 07/11/2019

Director Director

2.0 Mine Description:

Topography and general geology and local / mine geology of the mineral deposit including drainage pattern

Topography and general geology and local / mine geology of the mineral deposit including drainage pattern

The Nawada District comprises of two distinct landscapes i.e Plain land of North and the hilly area of the south. 45% comes under the plain land which is used for agricultural purposes. Nawada is a perfect combination of natural scenery combined with panoramic views, Nalanda known for its glorious past lies on the northern side of Nawada while Hazaribagh is located in its south. In the east lies Giridih, a very beautiful and holy place and finally in the west lies Gaya. Therefore, geographically it is clear that Nawada is surrounded by all these place which are hold great historical and geographical importance.

General Geology

The main geological formation in the area is pre-Cambrian rocks of Archaean age. The crystalline rocks in the district are mica schist, granite gneiss, quartzites & quartz schist, hornblende schist & mica pegmatites etc. These rock types constitutes the hill ranges &cover south and eastern parts of Rajauli blocks,southern parts of sirdala block north central & southern parts of govindpur blocks & south, south-eastern & northern parts of kauakol block.

Availability of Mineral resources in Nawada district:-

The mineral resources of Nawada district playing massive role in industrial, social and economic development of the district.

Available mineral resources in the district

- ✓ Sand
- ✓ Sandstones
- ✓ Quartzite
- ✓ Mica

Regional Geology

Geologically, it represents nearly two third of Bihar is under cover of Ganga basin composed of alluvium and masks the nature of basement rocks.

Prepared by Pravin Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3815 Dated 07/11/2019

Maa Laxmi Creative Pvt. Ltd.

Director

Director

Showing the Geological Succession and their Occurrences distribution

Age	Geology	Occurrences
Quaternary	Alluvial Deposits (Sand, Clay, Silt, Fragments)	North Bihar Plain & Central Bihar Plain
Tertiary	Sand Stones & Clay Stones	North Champaran Hills
Gondwana	Coal Measures, Forming a series of Small outlier basins	Banka District
Vindhyans	Sandstones, Shales, Limestones, etc.	Parts of Bahbhua and Rohtas dist
Satpura	Schist, Phyllite, Quartzite	Part of Aurangabad, Gaya, Nawada, Nalanda, Sheikhpura and Munger District
Proterozoic	Mica Schist, amphibolites, quartzite, granite, dolerite and pegmatite	Nawada, Jamui and Banka
Archaean	Gneisses, Granites, Schists, Phyllites, quartzite, amphibolites & intrusive all metamorphosed sedimentary and igneous rocks	Part of Aurangabad, Gaya, Nawada, Jamui, Banka and Bhagalpur

4.1.3 GEOLOGY OF THE AREA

The area of the district falls in the Zone-III B, South West Alluvial Plain agro climatic zone of Bihar. The district of Nawada does not have any important perennial river. The topography of the district is plain and border area adjoining Jharkhand is rocky terrain & mountains. The area is dominated by medium to fine sand geologically the area comprising of Terrace alluvium deposited in depositional terraces of old rivers & contain cyclic sequence of fine to course grained sand. It is angular to subangular and the angularity of the grains of this category of sand decreases with depth. The Litho unit shown on the geological map of the leased out area have been plotted on the basis of physical characteristics observed in the field. Sand and silt are deposited in the middle of the river whereas fine sand and soil are deposited at the fringe of the river banks. Soil/ alluvium varying in thickness from 0.20m to 0.60m m constitute the top horizons in the area suitable for agriculture. River Sakari, Dhadhar, Nati, Khuri, Tilaiya & Dhanarjay meanders through the area exposing the alluvium and soil at the banks.

The litho units encountered in the riverbed and surrounding areas belongs to the Shivalik super groups. The size of the sediments towards the source i.e. host rock is course and at the tale end of the river the grain size is reduced to smaller sizes resulted in the formation of clay beds. The

Prepared by: Pr[illegible] Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
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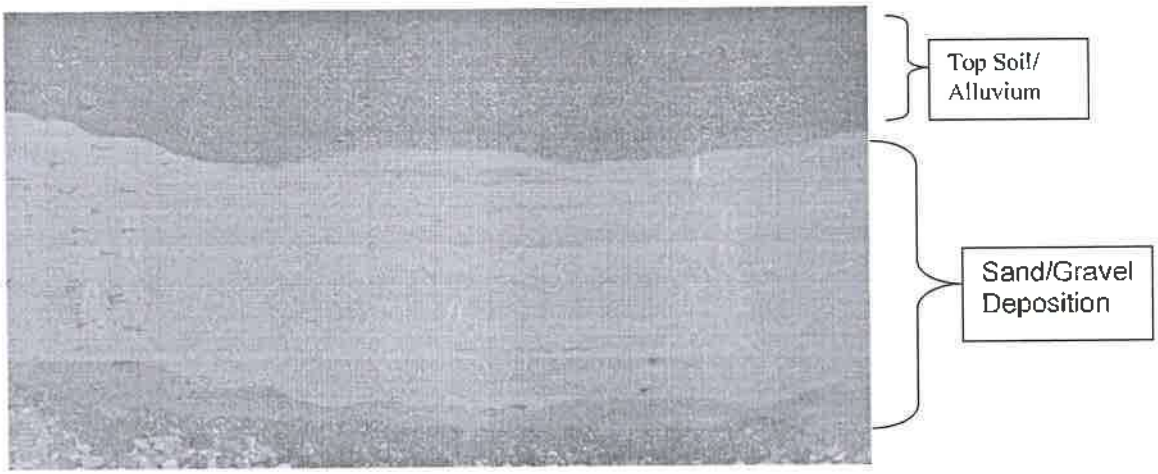
Ma[illegible] Creative Pvt. Ltd.
Director
Director

following sequences have been observed in the area, i.e. Top soil/ Alluvium followed by sand deposition (as shown in the figure below).



Sand and silt are deposited in the middle of the river whereas fine sand and soil are deposited at the fringe of the riverbanks.

Soil/ alluvium varying in thickness from 0.20m to 0.60m m constitute the top horizons in the area suitable for agriculture. River Sakari, Dhadhar, Nati, Khuri, Tilaiya & Dhanarjay meanders through the area exposing the alluvium and soil at the banks. Sand is found in the river bed upto a depth of more than 3.0 m. The major part of bed remains dry as water flows in a single stream during the non-monsoon seasons. Only during rainy seasons the entire flood plain has water, when there will be no mining done.

DETAILS OF EXPLORATION:

a) Already carried out in the area:

No exploration has been carried out as sand lies all over the area & average thickness of sand is 2.0 m & area replenish every during the monsoon period. Therefore is no exploration has been carried out.

b) Proposed to be carried out:

Sand average thickness of 2.0 m lies all over the area & area replenish every during the monsoon period. Therefore no proposal of exploration has been given.

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Director

2.2 Reserves:

BLOCK- 22 (PARORIYA) SAND GHAT

i) **Geological Reserves : -**

Classification	Code	Quantity of Sand
A) Mineral Reserves		Cum
1) Proved Mineral Reserves	111	131600
Total		**131600**

Total Geological Reserve = **131600 cum. or 236880 tonnes.**

*Bulk density is 1.80 g/cm^3

BLOCK- 22 (PARORIYA) SAND GHAT OF TILAIYA RIVER

Bench Level (mRL)	Length (m)	Width (m)	Depth (m)	Volume (cum)	Tonnes
112 - 111	661	84	1	55524	99943
111 - 110	651	74	1	48174	86713
Total				103698	186656

Total Mineable Reserve = 103698 CUM or 186656 Tonnes

- Mineable reserve has been consider 60% approx. of geological reserve after applying the guideline of Enforcement & Monitoring Guidelines for Sand Mining 2020.
- The proposed production grant in **LOI is 78960** cum per year which is within the sustainable limit of mineable reserve.
- The BD for Sand has been adopted at 1.80 g/cm3 [Noida Testing Laboratories]

• CLASSIFICATION MINERAL RESERVES:

Sand Ghat	Area (Hect)	Geological Reserves (m3)	Mineable Reserves (m3)	Annual Permitted Reserve As per LoI (m3)
Block- 22 (Paroriya) Sand Ghat	**6.58**	**131600**	**103698**	**78960**

The annual extractable RBM comes to 78960 CUM or 142128 Tonnes. It will be replenished after rainy season every year.

Prepared by: Pramod Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
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Director

2.3 Mining Method:

Existing Method of mining:

It is fresh grant case of mining lease & at present no mining is being carried with the applied area.

b) Proposed method of mining:

- Mining activity will be carried out by open cast semi mechanized/OTFM method.
- No OB/ waste material will be produced in river bed. The sand shall be exploited upto depth of 3.0m only through the formation of bench height 1.5m & width 6.0m. An approach road having width 6.0m & gradient 1:12 shall be provided for the movement of loading machineries & transportation of sand. The sand shall be exploited with the deployment of an excavator & filled into Tractors/Trucks & transported to various buyers.
- No drilling/ blasting are required as the material is loose in nature.
- Proper benching of 1.5 m height will be maintained.
- Roads will be properly made and sprayed by water for suppression of dust.
- Roads in the applied area for the movement of loaded tractors/ trucks will not have slopes more than 1 in 16.
- The mined out area shall be replenished each year during monsoon period and maintained in maximum original topography.
- Approach roads from the various plots as already described earlier will be merging with permanent tar roads on both sides of the river for transportation of the mineral to final destinations.

2.4 Mineral beneficiation:

No mineral beneficiation will be under taken for next five years. The sand shall be exploited semi mechanized with shovel tractor trolley/tippers combination & transport to parties.

3.0 Review of implementation of mining plan / scheme of mining including five years progressive closure plan up to the final closure of mine:

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Director
Director

At is fresh grant case of mining lease it is therefore premature to make any comments about review of implementation.

4.0 Closure Plan:

4.1 Mined out land:

Mining is proposed in one block. The mining shall be carried out during post monsoon season & depth of mining shall restricted 3.0 m. Mining operation shall be suspended during monsoon period. The mined out pit shall be replenished during the monsoon period by sand and silt & leveled it. After over the monsoon period the replenish material shall be exploited manually as well as by means of an excavators & this process will continue.

The area already degrades due to mining & likely to be used during next five years is given below:

Activities	Area already used (Ha)	Area likely to be used in mining (Ha)
Pits & quarries	-	6.58
Approach road	-	-
Top soil Stack	-	-
Interburden dump	-	-
Backfilled pit	-	-
Total	-	**6.58**

(A) Mining:

Sl.No.	Activities	Area (Ha)
1.	Area already broken up	-
2.	Area already backfilled /reclaimed	-
Sl. No.	**Activities**	**Area (Ha)**
1.	Additional area proposed to be broken during next five years	-
2.	Additional area proposed to be replenished with flood water	-

(B) Dump:

Sl. No.	Activities	Area (Ha)
1.	Area already covered by dump	Nil
2.	Additional area to be covered by soil stack	-

Maa Laxmi Crushers Pvt. Ltd.
Director
Director

3.	Additional area to be covered by inter burden dump.	Nil
4.	Dump area to be covered by protective measures	-

(C) Plantation:

Sl. No.	Activities	Area(ha)
1.	Area already covered under plantation	-
2.	Area proposed to be covered under plantation in next five years (with in area)	-
	Total	-

4.2 Water Quality Management:

No ground water bodies exist within the area & no seasonal Nalla exists with in the area. The rain water accumulates in the pit & water percolates in to ground water.

Further no significant impact on water quality is anticipated as material exposed will be Sand & its shall very feebly react with water that too when water becomes acidic. Even of reaction takes place it gives arise to increased temporary hardness of water. Water is being supplied from the Tube well.

4.3. Air Quality Management:

The mining shall be carried out semi-mechanized/OTFM with use of excavators/JCBs truck /tractors combination or Manually etc. No adoption of drilling & blasting mining shall be carried out in shallow depth. No doubt the mining in this remote area will deteriorate the air quality. The base line values are too low due to remoteness of the area with our past experience. In this kind of terrain, the SPM, SO2 and NOX will always below 100, 10 & 10 microgram per meter cube respectively. Air quality monitoring shall be conducted once in a year as per CCOM'S circular No 3/92.

4.4. Waste management:

No waste shall be generated due to mining activities. All quantities of sand to be generated shall be bold in the local market. Therefore no proposal of waste management has been envisaged.

4.5 Top Soil Management:

No soil shall be generated during plan period & no proposal has been envisaged for its separate stacking & this management.

Maa Laxmi Creative Pvt. Ltd.

Director

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4.6. Tailing Dam Management:

No tailing dam is proposed in the soapstone mine.

4.7. Infrastructure:

No infrastructure facilities like aerial ropeway, conveyor belts, building & structure, water treatment plant, transport & water supply sources are present within the lease area. Therefore no utilization & their physical stability & maintenance will be required. Also no infrastructure facilities like telephone line, water pipe line, sewer line, gas pipe line, electrical cables, culvert, bridges are not existing within the lease area. So question does not arise for their restoration. The approach road passed within the lease area & lessee shall maintain it during PMCP period.

4.8. Disposal of Mining Machinery:

It will be opencast semi mechanized mine. No disposal of mining machineries shall be envisaged during plan period.

4.9. Safety and Security:

1. Each worker shall be provided with helmets & safety shoes.
2. Safety belt shall be provided to workers a working the top benches.
3. Hanging of loose materials shall be removed from mine faces.
4. The mining area shall be properly fenced to avoid any inadvertent entry in to mining pit.
5. Working hours shall be displaced at conspicuous places.
6. Mining shall be carried out thought the formation of benches maintaining overall pit slope 60deg.

4.10 Disaster Management and risk assessment:

The mining is proposed in a gentler river bed. The mining will go up to the economical depth of 3m therefore, no disaster management and risk assessment shall be observed. However during monsoon period the area shall be properly fenced with barbed wire to avoid any inadvertent entry of any live stock.

5.0. Economic repercussions of closure of mine and manpower retrenchments:

All the workers being employed are contractor labours. An any industry will provide direct and indirect employment. The local residents will earn tremendous amount of money due to mining activities. It will change their life style. Due to closure of mine, it will create very negative impact on the economy of the workers for their survival. Those earning good money will get some occupation for survival of their families. The literate

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Director

Director

workers will move here and there for the search of job. In the overall view the closure of mine will give very bad impact on the society and surrounding areas.

5.1 Local residents of nearby villages will be employed in the mine. The family occupation is most by farming. Few of them occupation carpentry & masonry.

5.2 The lessee pay each year about 5,000 to 10,000 as a compensation for the sustenance of the few workers family.

5.3 About 30% of the workers employed in mine are independent but they are controlled depended by their family members.

5.4 The local residents will be employed in the mining operations, and allied activities related to mining operations.

5.5 During mining operations the land owners & society of the area shall earn lucrative amount of money from direct & indirect activities. Individual land owners shall also earn good amount of money in terms of royalty. Most of them will spend money to establish other business also. After mining, the total land shall be backfilled & agricultural activities shall be recommended. No repercussion should be observed during the closure of mine.

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Director

Director

6.0 Time Scheduling for abandonment:

It is proposed in the mining plan that mining will open from lower levels and subsequently advance towards higher elevations so that concurrent reclamation will be under taken to restore the topography of area. The mined area will be replenished during the monsoon period.

The year wise schedule of completion of quantities is given below:

Activities	YEAR				
	I	II	III	IV	V
Toe wall along Soil stack	-	-	-	-	-
Backfilling (Cum)	-	-	-	-	-
Plantation (No. of sampling, out side the area)	14	14	14	14	14

The tentative cost of implementation of activities during next five years is given below:

Sl. No.	Activities	Year					Total amount on Rs.
		I	II	III	IV	V	
1.	Toe wall (soil stack Rs. 40/m)	-	-	-	-	-	-
2.	Retaining at the edge of backfilled wall pit (Rs. 50/m)	-	-	-	-	-	-
3.	Plantation (Rs. 1000/- sapling with in the area)	14	14	14	14	14	70000
	Total						**70000**

The tentative cost (In Rs) of implementation of activities during next five years is given below:

Tree guard @ 800 per unit	800
Per plant species cost	100
Average Water demand cost per species Per Year	100
Total	1000

Maa Laxmi Creative Pvt. Ltd.

Director

Director 3

7.0 Abandonment Cost:

The tentative cost for implementation of protective and rehabilitation measures, the proposal given in the mining plan for next five years period is as under:

Activity	Year						Rate In Rs.	Amount In Rs.
	I	II	III	IV	V	Total		
i) Toe wall at the base and side of soil stack (mtr)	-	-	-	-	-	-	40/m	-
iii) Retaining wall at the edge of backfilled pit (m)	-	-	-	-	-	-	-	-
iv) Plantation (no. of sapling with in the area.)	14	14	14	14	14	70	1000/-	70000
v) Reclamation(Cum.)	-	-	-	-	-	-	40cum	-
Total								**70000**

Maa Laxmi Creative Pvt. Ltd.

Prepared by: Pravin [illegible] Sinha Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3825 Dated [illegible]/1/2019

8.0 Any other information:

Community Development: The expensed increased towards the socio-economic development is given below:

Proposed Action Plan Towards socio economic development	First Year to Fifth Year	
	Expenditure proposed (in Rs.)	Expenditure in occurred (in Rs.)
General Development of the area	-	-
i) Housing	50,000	-
ii) Water Supply	25,000	-
iii) Sanitation	20,000	-
iv) Health, Safety & Medical Facilities	30,000	-
Education & Training	30,000	-
Employment to local inhabitants; Land owner compensation; Supervisor & Headers etc.	1,00,000	-
Public Transportation & Communication	20,000	-
Recreation & other sports activities	20,000	-
Expenditure for environment management	15,00,000	-
Others (Compensation to land owners)	80,000	-

Maa Laxmi Crusher Pvt. Ltd.

9.0 Financial Assurance:

The financial assurance has been calculated on the basis of following parameters:

Sl. No.	Head	Area put on use at start of plan (In Ha)	Additional requirement during plan period. (In Ha)	Total (in Ha)	Area considered as fully reclaimed & rehabilitated (In Ha)	Net area considered for calculation (In Ha)
1.	Area under mining	-	6.58	6.58	6.58	0
2.	Storage for top soil	-	-	-	-	0
3.	interburden/ dump	-	-	-	-	0
4.	Mineral storage	-	-	-	-	0
5.	Infrastructure (Workshop, administrative building etc.)	-	-	-	-	0
6.	Approach Road		-	-	-	-
7.	Railways	-	-	-	-	0
8.*	Green Belt	-	-	-	-	-
9.	Tailing pond	-	-	-	-	0
10.	Effluent Treatment Plant	-	-	-	-	0
11.	Mineral Separation Plant	-	-	-	-	0
12.	Township area	-	-	-	-	0
13.	Others to specify (retaining wall + toe walls	-	-	-	-	-
	Grand Total		6.58	6.58	6.58	-

The total mined out area shall be replenished each year during monsoon period & no broken area will be remained in the applied area. Therefore, it is not possible to calculate financial assurance at this stage.

Date:

Place: Nawada

* Plantation will be done along both sides of roads and civic amenities in consultation with the local authorities.

Prepared by: Pravin Kr. Sinha Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3825 Dated 07/[illegible]/2019

Maa Laxmi Creative Pvt. Ltd.
for
Director

ANNEXURE

DEPARTMENT MINES AND GEOLOGY, GOVT. OF BIHAR * PATNA *

Mob - 9931251147 Mob. - 9973121741

M/s MAA LAXMI CREATIVE PVT. LTD.

Miner Mineral & Govt. Contractor

At.+P.o-Tungi, Hisua (Nawada) - 805129

Email-maalaxmi47@gmail.com

Ref No. - Date .....

AUTHORISATION LETTER BY THE APPLICANT/ LESSEE

I, **Chunchun Kumar & Others** hereby authorise **Er. Pravin kumar Sinha, Reg.No.- RQP/BIH/SR.NO.20 Letter No. 3825 Dated 07/11/2019** to prepare the Mining plan Submitted under Rule (17) of Bihar Minerals (concession, prevention of illegal transportation & storage) Rules 2019 in respect of Maa Laxmi Creative Private Limited at over an area of 6.58 Hectare for mineral(s) for Block- 22 (Paroriya) Sand Ghat (Tilaiya River) at Mauja– Paroriya, Block– Meskaur, Dist- Nawada, (Bihar).

I request The Director, Department of Mines & Geology Patna, Bihar to make further correspondence regarding modification and to collect the approved copies of the aforesaid mining plan with the said recognized person on his following address:

Name of RQP : Er.Pravin Kr. Sinha
Reg. No. - RQP/BIH/SR.NO.20
Letter No. 3825 Dated 07/11/2019

Address of RQP

: Consultant :
P & M Solution
201,Mangal Market
Raja Bazar, Patna (Bihar)
9889024004 & 7542949027
indusminingbihar@gmail.com

Place :

Date :

Proponent,
Maa Laxmi Creative Pvt. Ltd.
Director Director
Dir.- Chunchun Kumar & Others
Maa Laxmi Creative Private Limited
S/O.- Lt. Anandi Singh,
Address- Tungi, Hisua, Nawada,
Bihar- 805129.

Certificate

1. *Certified that the provisions of mines Act, Submitted under Rule (17) of Bihar Minerals (concession, prevention of illegal transportation& storage) Rules 2019made there under have been observed in Block- 22 (Paroriya) Sand Ghat (Tilaiya River) at Mauja– Paroriya, Block– Meskaur, Dist- Nawada, (Bihar) and wherever specific permissions are required, the lessee will approach concerned authorities for granting permission.*

2. *The information furnished in Block- 22 (Paroriya) Sand Ghat (Tilaiya River) is true and correct to the best of my knowledge.*

(Pravin Kumar Sinha)

Regd.No: RQP/JBP/129/2011/A.

Place: -Patna

Date:-

(Approved RQP under Bihar Government)

20	Pravin Kumar Sinha	7542949027	B.E (Mining)	Rs. 2,000/- per Hectare (Each Block Mining Plan - Rs. 30,000/-)		201,2nd Floor,Mangal Market,Raja Bazaar, bailey Road, Patna-14
21	Md. Tauseef Warsi Greenera Mining & Envirotech Pvt. Ltd.	9534027112	M.Sc. (Geology)	Rs. 5,000/- (Excluding GST)		Greenera Mining & Envirotech Pvt.Ltd.,205 Mangal Market,Raja Bazar,Bailey Road Patna-800014
22	Prabhat Kumar Srivastava	8827477206	B.E(Mining)	Rs. 8,000/-		Flat No-101, Road No.-01, Boodh Nagar, Chiriya Tard, Postal Park , Patna-800001
23	Ashok Kumar Singh	8766859804	Mining Engineer	Rs. 8,000/-		C/o Shri Ram Prasad Singh, Mohalla - Mogal Kuan, P.O. - Sohsarai, P.S. - Sohsarai, Dist.- Nalanda, Bihar- 803118
24	Sandeep Kumar	8126253120	M.Sc. (Applied Geology)	Rs. 10,000/-		Anpurna Bhavan , C/O Ravi Kishan, Sundar Nagar, Lohia Path , Jagdeo Path , Patna - 800014 (Bihar)
25	United Exploration India Pvt. Ltd.	9431208782 9934304369	Required Qualification of the employees attached	Rs. 5,200/- (inclusive all Taxes)		301,2nd Floor ,Sahid Rajendra Singh Complex,Anishabad , Patna-800002
26	Rian Enviro Pvt. Ltd	9431289638	Required Qualification of the employees attached	Rs. 5,000/- (inclusive all Taxes)		202,2nd Floor,Mangal Market,Raja Bazar,Sheikhpura Patna -800014
27	Ascenso Enviro Pvt. Ltd.	9204207920	Required Qualification of the employees attached	Rs. 4,750/- (inclusive all Taxes)		401,4th Floor ,Mangal Market,Raja Bazar,Sheikhpura,Patna-800014
28	M/s Baghel Environment & Waste Management Pvt. Ltd.	9431042532	Qualifications of candidates are attached	As decided by the department of Mines & Geology, Govt. of Bihar		Baghel Environment & Waste Management Pvt. Ltd. ,1st Floor, 27, Guru Sahay lal Nagar, Road No. 2, Magistrate Colony, Ashiyana Nagar, Patna - 800025, Bihar
29	Gramin Lok Seva	9934452711	Qualifications of candidates are attached	Rs. 7,000/-	Note - 1. Minimum rate for a Sand Block - INR 25,000/- 2. Maximum rate for a Sand Block - INR 60,000/- OR As decided by the Department of Mines & Geology, Govt. of Bihar	27, Guru Sahay Lal Nagar, Magistrate Colony, Ashiyana nagar, patna- 800025, Bihar
30	Praneja Envirocare & Management Pvt. Ltd.	9708251824	Qualifications of candidates are attached	Rs. 10,000/- (Excluding GST @18%)	Remarks - Fee should not be less than 20,000 or more than 50,000 thousand for single block. (Excluded GST) OR As decided by the Department of Mines & Geology, Govt. of Bihar	103, Bhagwati kunj apartment, Road No. - 30, Anand Vihar Colony, Rukanpura, Patna (Bihar)- 800014
31	Institute of Environment and Eco Development	7004620817	Details Of Qualification Attached	Rs. 10,000/- (Excluding GST)	Rate will be negotiable as per direction from Department of Mines & Geology, Govt. of Bihar.	Admin. Office--Ground floor, Shyam Nagar Colony, Maurya Path, Bailey Road, PO-B.V. College,Patna--800014
32	ENV Developmental Assistance Systems (India) Pvt. Ltd.	5224007470 9335913139	Details Of Qualification Attached	Rs. 2,750/- (inclusive all Taxes)		Prabha Niketan, road No.-13,Patel Nagar, Near Petrol Pump,,Patna-800029

ज्ञापांकः– 3825 /एम0, दिनांक– 07/11/19

प्रतिलिपिः– माननीय मंत्री के आप्त सचिव/प्रधान सचिव के प्रधान आप्त सचिव/निदेशक कोषांग/उप निदेशक (मु0)/सहायक निदेशक (मु0)/खनिज विकास पदाधिकारी (मु0) को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

7/11/19

7/11/19

सरकार के अवर सचिव

MINES AND GEOLOGY, GOVT. OF BIHAR

(Accreditation Certificate)

1.	1	Mining of minerals including opencast / underground mining	A	1 (a) (i)
2.	3	River Valley projects	B	1 (c)
3.	8	Metallurgical industries (ferrous & non-ferrous)	B	3 (a)
4.	34	Highways,	A	7 (f)
5.	38	Building and construction projects	B	8 (a)
6.	39	Townships and Area development projects	B	8 (b)

1.1.3 EIA Coordinators (ECs)

Sl. No	Name	Sectors			Cat.	Remarks
		Applied	Recommended	Approved		
In-house						
1	Jatin Kumar Srivastava	1	Yes	Yes	B	Opencast only.
2	Pravin Kumar Sinha	1	Yes	Yes	B	None
Empanelled						
3	Tapan Majumdar	1	Yes	Yes	A	With an observation.
4	Mayank Kumar	3	Yes	Yes	B	None
		34	Yes	Yes	A	
		38	Yes	Yes	B	
		39	Yes	Yes	B	
5	Vikas Chand Tripathi	8	Yes	Yes	B	None
		38	Yes	Yes	B	With an observation.

1.1.4 Functional Area Experts (FAEs)

Sl. No	Name	Functional Areas (FA)			Cat.	Remarks
		Applied	Recommended	Approved		
In-house						
1	Jatin Kumar Srivastava	SC	Yes	Yes	B	None
		NV	Yes	Yes	B	
		WP	Yes	Yes	B	
		EB	Yes	Yes	B	
2	Pravin Kumar Sinha	GEO	Yes	Yes	B	None
3	Amit Kumar	SHW	Yes	Yes	B	SW only
		AP	Yes	Yes	B	With an observation.
		WP	Yes	Yes	B	
4	Manoj Kumar Pandey	EB	Yes	Yes	B	None
5	Hussain Ziauddin	SHW	Yes	Yes	B	HW only
		WP	Yes	Yes	B	None
6	Abhay Nath Mishra	SE	Yes	Yes	B	With an observation
Empanelled						
7	Tapan Majumdar	GEO	Yes	Yes	A	None
		HG	Yes	Yes	A	
8	Mayank Kumar	EB	Yes	Yes	B	None
9		SHW	Yes	Yes	B	SW only.

जिला खनन कार्यालय, नवादा।

पत्रांक 2511 / खा0,

प्रेषक,

खनिज विकास पदाधिकारी,
नवादा।

सेवा में,

MAA LAXMI CREATIVE PRIVATE LIMITED,
Dir.- CHUNCHUN KUMAR & Others,
S/o.- Lt. Anandi Singh,
Address- TUNGI, HISUA, NAWADA, Bihar- 805129.
Email- maalaxmi47@gmail.com
Mob. No.- 9931251147.

नवादा, दिनांक - 07/10/2022.

विषय :— नवादा जिलान्तर्गत बालूखण्ड— 22 (परोरिया बालूघाट) की आगामी पाँच वर्षों के लिए बन्दोबस्ती हेतु दिनांक— 28.11.2022 को सम्पन्न ई—नीलामी में उच्चतम् डाकवक्ता घोषित होने के फलस्वरूप **सैद्धांतिक स्वीकृत्यादेश के संबंध में।**

महाशय,

उपर्युक्त विषयक नवादा जिलान्तर्गत **बालूखण्ड— 22 (परोरिया बालूघाट)**, रकवा— 6.58 हेक्टेयर की आगामी पाँच वर्षों के लिए बन्दोबस्ती हेतु दिनांक— 28.11.2022 को सम्पन्न ई—नीलामी में **निर्धारित सुरक्षित जमा राशि मो0— 59,22,000/— (उनसठ लाख बाईस हजार)** रू0 के विरूद्ध आपके द्वारा **मो0— 3,84,93,000/— (तीन करोड़ चौरासी लाख तिरानबे हजार)** रू0 की उच्चतम डाक बोली गई है, फलस्वरूप आप उच्चतम डाकवक्ता घोषित हुए हैं। निविदा दस्तावेज की कंडिका— 20 (i) के आलोक में आपके द्वारा नीलामी राशि की 25 प्रतिशत राशि (जमा अग्रधन राशि समायोजनोपरान्त) **प्रतिभूति जमा के रूप में मो0— 81,42,750/-** (इक्यासी लाख बेयालीस हजार सात सौ पचास) रू0 के भुगतान का साक्ष्य कार्यालय में प्रस्तुत किया गया है।

निविदा दस्तावेज की कंडिका 20(i)(ii)(iii)(iv)(v) के आलोक में जिलान्तर्गत बालूखण्ड— 22 (परोरिया बालूघाट) के सैद्धांतिक स्वीकृति की शर्त्त एवं बंधेज निम्नवत् हैं :—

1. बालूखण्ड— 22 (परोरिया बालूघाट) से संबंधित विवरणी निम्नवत् है :—

क्र.	नदी का नाम	रकवा (हेक्टेयर में)	Geo CO-ORDINARE			
			A	B	C	D
1	तिलैया (Non-Perennial)	6.58	24°43'13.01"N 85°23'1.72"E	24°43'12.67"N 85°23'3.51"E	24°43'34.93"N 85°23'6.37"E	24°43'33.51"N 85°23'9.09"E
2	वन क्षेत्र से दूरी		5Km			
3	सुरक्षित क्षेत्र/वन अभ्यारण्य क्षेत्र/पक्षी अभ्यारण्य/वन्य जीव आश्रयण क्षेत्र से दूरी		लागू नहीं।			
4	बालूघाट/बालूखण्ड से 500 मीटर के अन्दर खनन पट्टा क्षेत्र की स्थिति		लागू नहीं।			
5	पुरातात्विक स्थल से दूरी		लागू नहीं			
6	खनन योग्य मात्रा		78960 घनमीटर			

2. **भुगतान की शर्तें :—**

(i) नीलामी—राशि केवल प्रथम वर्ष के लिए बंदोबस्ती की राशि मानी जाएगी। दूसरे वर्ष और उसके अनुक्रमी वर्षों में बंदोबस्ती की राशि गत् वर्ष की बंदोबस्ती राशि के 120 प्रतिशत् अथवा समय—समय पर सरकार द्वारा निर्धारित निदेशों के अनुरूप होगा।

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iv. खनन के लिए अनुमत मात्राः– खनन योजना, पर्यावरणीय स्वीकृति तथा जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1974 तथा वायु (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1981 के तहत प्राप्त सहमति मे वर्णित बालू की मात्रा (इनमें से जो भी कम हो) तक ही खनन अनुमान्य होगा। यदि अनुमोदित खनन योजना, पर्यावरणीय स्वीकृति तथा जल एवं वायु सहमति में खनन योग्य मात्रा कम किये जाने पर भी वार्षिक देय बंदोबस्ती राशि किसी स्थिति में कम नहीं की जाएगी।

v. बिना किसी वैध कारण के पर्यावरणीय स्वीकृति, Consent to Establish/ Consent to Operate /जल एवं वायु सहमति प्राप्त नहीं कर पाते है या प्राप्त करने में रूचि नहीं लेते है तो, समाहर्त्ता द्वारा अग्रधन की राशि को जप्त कर लिया जाएगा।

7. बंदोबस्ती विलेख/पट्टा संविदा (डीड) निष्पादन करना :–

i. सफल डाकवक्ता द्वारा सभी वैधानिक अनापत्ति प्राप्त करने के उपरान्त 5 वर्षों की अवधि के लिए बालू खनन करने हेतु समानुदान/बन्दोबस्ती स्वीकृत किया जाएगा। सफल डाकवक्ता विहित प्रपत्र में संबंधित नियमानुसार बंदोबस्ती विलेख अथवा उसके समरूप एक प्रपत्र, कार्य आरंभ करने के पहले, निष्पादित करेगा तथा यथा विहित अपेक्षित प्रतिभूति राशि जमा देगा। बंदोबस्तधारी के पट्टे की अवधि विलेख/संविदा निष्पादन की तिथि से पॉच वर्षो के लिए विधिमान्य होगा।

ii. बंदोबस्तधारी को निष्पादित संविदा का निबंधन संबंधित विभाग के प्रचलित नियमों के अधीन 01 माह के अन्दर कराना अनिवार्य होगा।

8. सामान्य शर्त्तें :–

(i) बंदोबस्तधारी नदी तट से बालू प्रेषण के बिन्दु पर एक साईनबोर्ड एवं सीमा स्तंभ का अधिष्ठापन करायेगा जिसपर बंदोबस्तधारी का नाम एवं पता, बंदोबस्ती की अवधि, स्थानीय मैनेजर का नाम एवं पता तथा बालू का विक्रय मूल्य प्रदर्शित किया जाएगा। यदि साईन बोर्ड निरीक्षण में नहीं पाया गया तो शास्ति अधिरोपित की जाएगी।

(ii) बंदोबस्तधारी श्रम विधियों के प्रावधानों के अनुसार आश्रय गृह, पीने का पानी, शिशु गृह (क्रेचेज) तथा फर्स्ट एड किट की व्यवस्था संबंधित बालूघाटों में लगे श्रमिकों के लिए करेगा।

(iii) बंदोबस्तधारी संबंधित क्षेत्रों का निरीक्षण करेगा तथा स्वयं/ अथवा अपने द्वारा अधिकृत प्रतिनिधियों के माध्यम से बालूघाटों का प्रचालन करेगा। किसी रूप में किये गये उपपट्टा (सबलेटिंग) के लिए बंदोबस्ती रद्द कर दी जाएगी। बालूघाटों/नदी तल तक बालू के परिवहन के प्रयोजनार्थ पहुँच–पथ (अप्रोच रोड़) का निर्माण सफल डाकवक्ता/बंदोबस्तधारी द्वारा स्वयं अपने खर्च से किया जाएगा।

(iv) बालूघाट की सुरक्षा की जिम्मेदारी सफल डाकवक्ता/बंदोस्तधारी की होगी।

(v) सफल डाकवक्ता/बंदोबस्तधारी बंदोबस्त क्षेत्र के भीतर किसी अवैध खनन के लिए जिम्मेवार होगें और पाई गई किसी शिकायत पर गंभीरता से विचार किया जाएगा तथा बंदोबस्तधारी के विरूद्ध अपराधिक मामला दायर किया जाएगा।

(vi) सफल डाकवक्ता/बंदोबस्तधारी समाहर्त्ता द्वारा बालूघाटों के संचालन के संबंध में लोकहित में जारी निर्बंधनों और शर्त्तो तथा निदेशों का पालन करेगा।

(vii) यथोक्त शर्त्तों, बंधेजों एवं निर्बंधनों का पालन नहीं करने पर कारण पृच्छा निर्गत कर बंदोबस्ती रद्द करने की कार्रवाई की जा सकेगी ।

(viii) सफल डाकवक्ता/बंदोबस्तधारी को खनन राजस्व/जी0एस0टी0/आयकर/स्टाम्प शुल्क/ रजिस्ट्रेशन फीस का भुगतान नही करने की दशा में 30 दिनों के अंदर कारण स्पष्ट करने हेतु नोटिस दी जायेगी। निर्धारित अवधि के अंदर सफल डाकवक्ता/बंदोबस्तधारी द्वारा बकाया का भुगतान करने में असफल रहने की दशा में राशि वसूली की कार्रवाई के साथ–साथ बंदोबस्ती रद्द करने की भी कार्रवाई की जाएगी।

(ix) नीलामी हेतु प्रस्तावित बालूघाटों से संबंधित तकनीकी तथा अन्य बिन्दुओं यथा भूमि के अंचल, थाना, मौजा, खाता, खेसरा, रकबा तथा GPS Co-ordinate के संबंध में विवाद/त्रुटि पाए जाने पर संशोधन का अधिकार संबंधित जिला खनन कार्यालय का होगा। बालूघाटों का सीमांकन एवं नियमानुसार निर्धारित आयाम/विशिष्टियों का सीमा स्तंभ का अधिष्ठापन GPS Co-ordinate के अनुसार बालू बंदोबस्तधारी को कराना होगा तथा खनन के क्रम में

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अंचल कार्यालय मेसकौर (नवादा)।

तिलैया नदी

Sr No	Name of River	Name of Sand Ghat	Area in Hect.	GPS Co-ordinates				Mauja/Villege	Block Name	Thana/Thana No.	Khata No	Plot No.	Types of River
1	Tilaiya River	Parorriya Sand Ghat	6.58	24°43'1.3.01"N 85°23'1.72"E	24°43'13.01"N 85°23'1.72"E	24°43'12.87"N 85°23'3.51"E	24°43'34.93"N 85°23'6.37"E	Parorhya	Meskaur	Sirdala /39	347	121	
Total Area in Hect.			11.6										

अंचल अधिकारी
मेसकौर

DEPARTMENT MINES AND GEOLOGY GOVT. OF BIHAR * PATNA *

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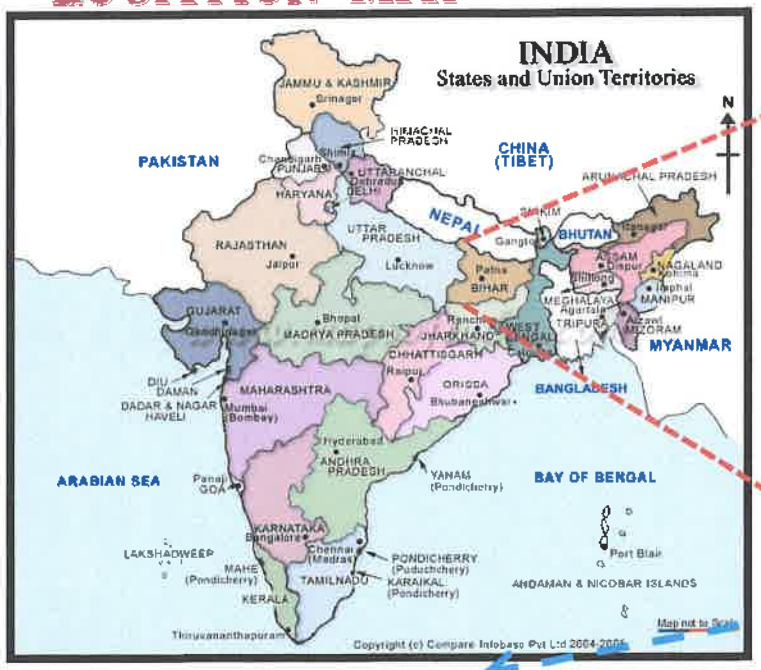
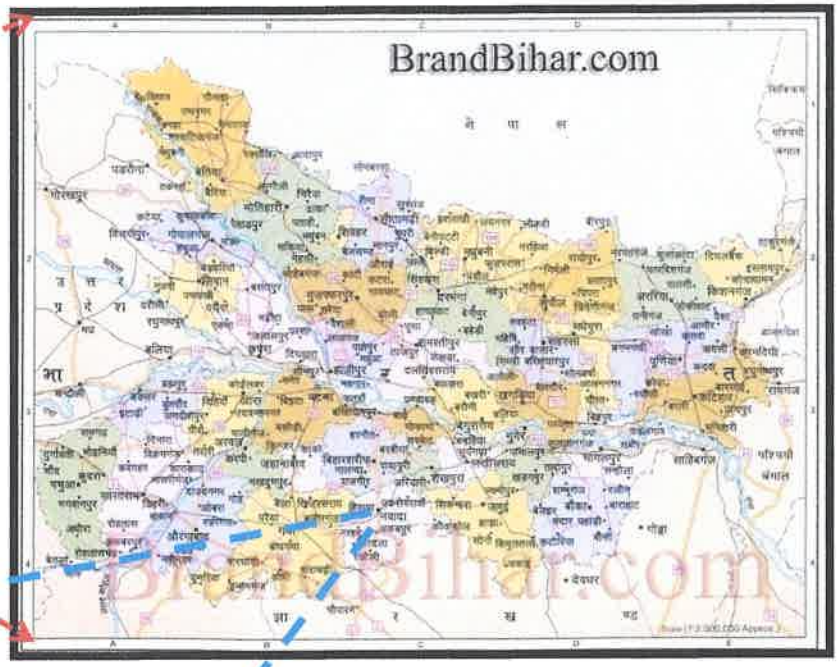
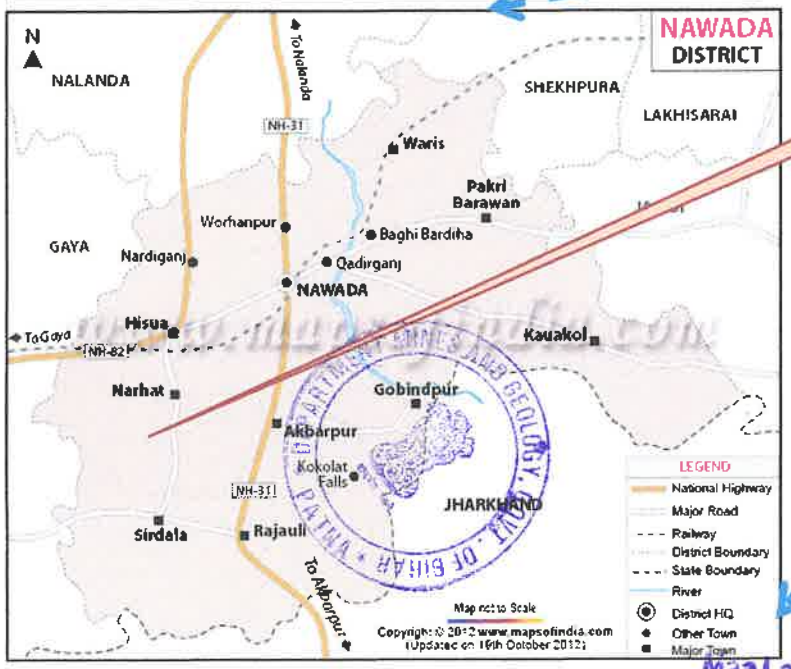
PLATES

LOCATION MAP







PARORIYA

Plate No.1

LOCATION MAP
BLOCK- 22 (PARORIYA) SAND GHAT TILAIYA RIVER (AREA- 6.58 HA.) MAUJA– PARORIYA, BLOCK– MESKAUR, DIST- NAWADA, (BIHAR).
SETTLEE :- MAA LAXMI CREATIVE PRIVATE LIMITED PROP.- DIR.- CHUNCHUN KUMAR & OTHERS
PREPARED BY :- REG. NO. - RQP/BIH/SR.NO.20 LETTER NO. 3825 DATED 07/11/2019
SIGNATURE

Maa Laxmi Creative Pvt. Ltd.

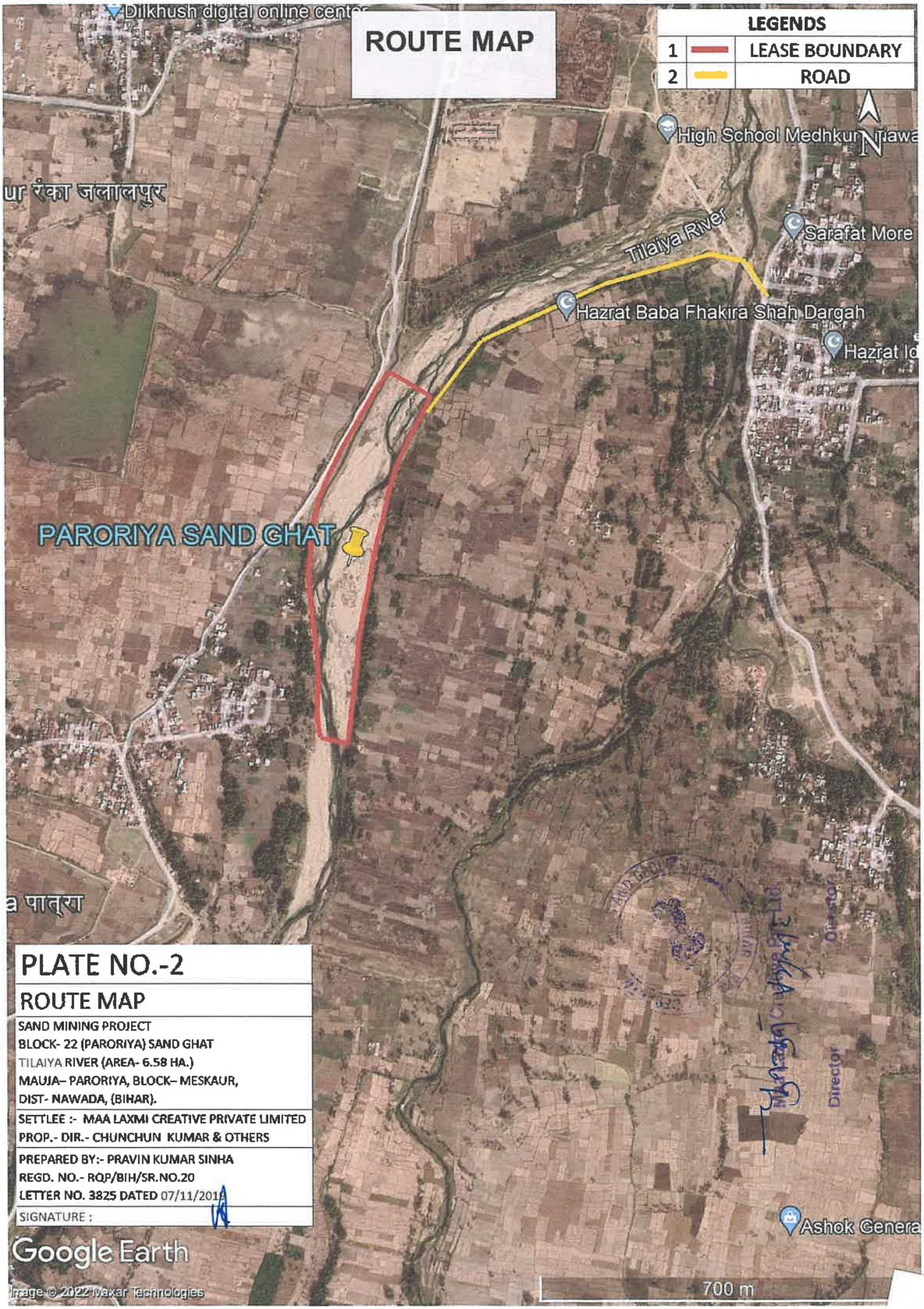


PLATE NO.-2

ROUTE MAP

SAND MINING PROJECT
BLOCK- 22 (PARORIYA) SAND GHAT
TILAIYA RIVER (AREA- 6.58 HA.)
MAUJA– PARORIYA, BLOCK– MESKAUR,
DIST- NAWADA, (BIHAR).

SETTLEE :- MAA LAXMI CREATIVE PRIVATE LIMITED
PROP.- DIR.- CHUNCHUN KUMAR & OTHERS

PREPARED BY:- PRAVIN KUMAR SINHA
REGD. NO.- RQP/BIH/SR.NO.20
LETTER NO. 3825 DATED 07/11/2018

SIGNATURE :

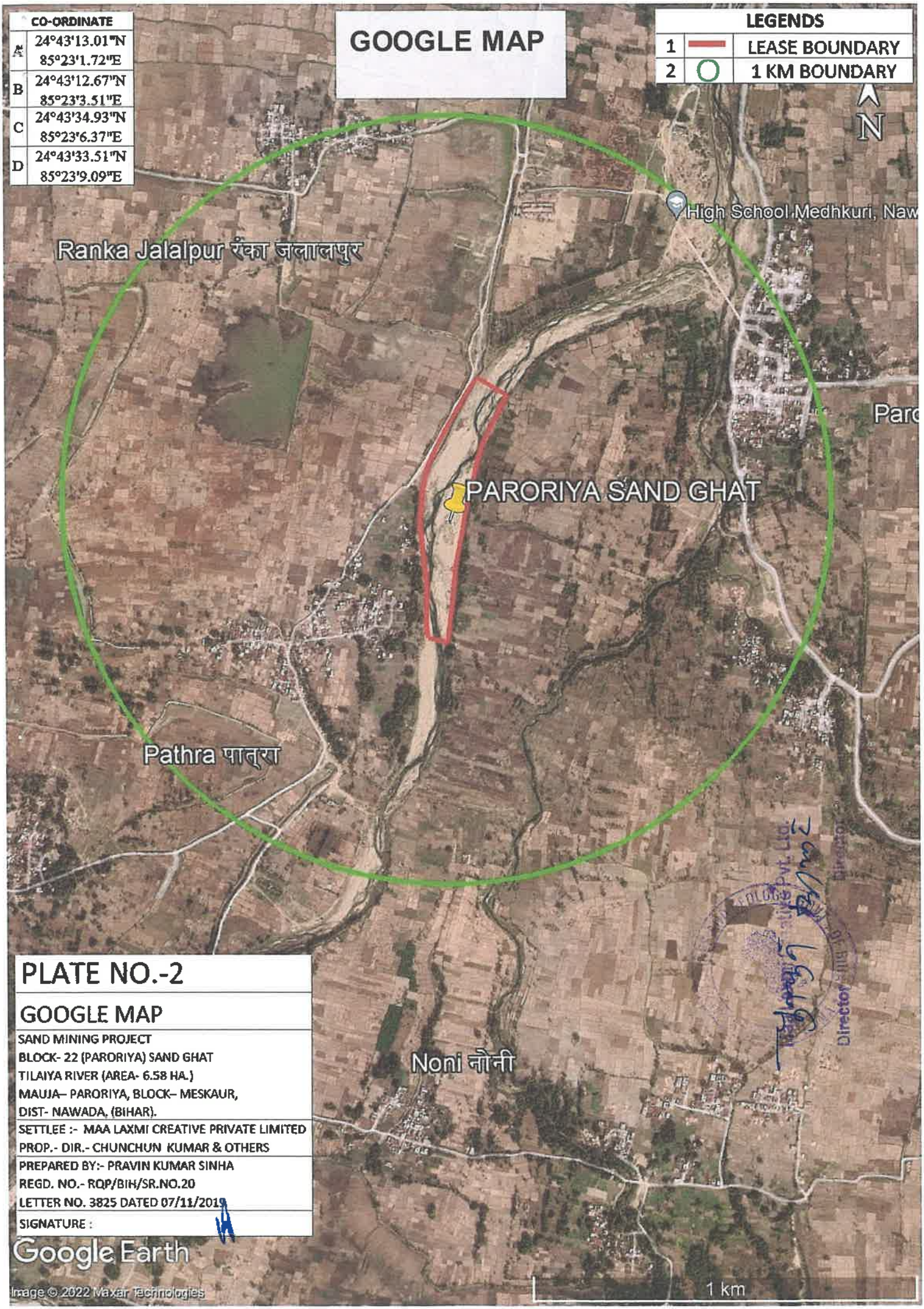


PLATE NO.-2

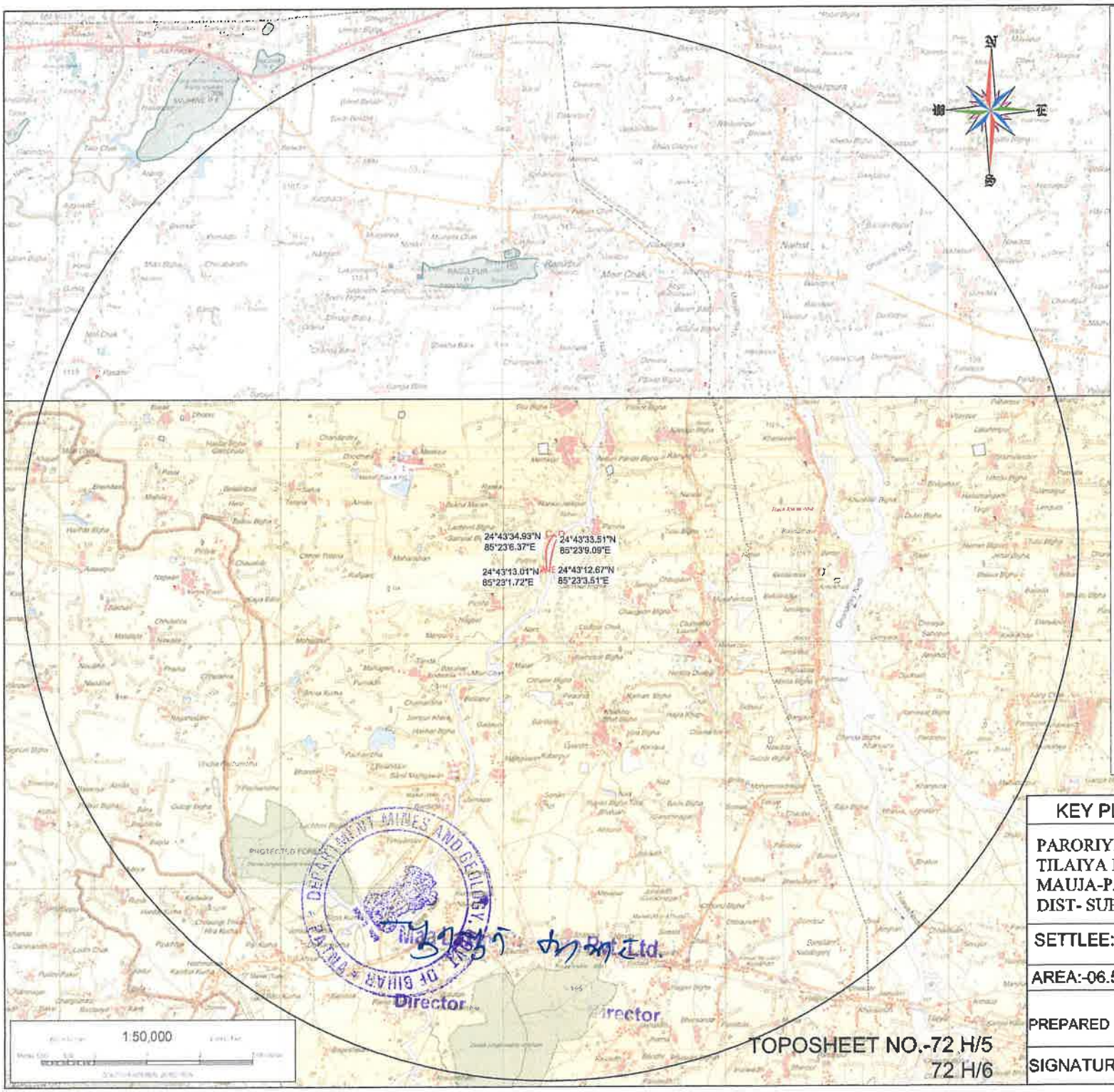
GOOGLE MAP

SAND MINING PROJECT
BLOCK- 22 (PARORIYA) SAND GHAT
TILAIYA RIVER (AREA- 6.58 HA.)
MAUJA– PARORIYA, BLOCK– MESKAUR,
DIST- NAWADA, (BIHAR).

SETTLEE :- MAA LAXMI CREATIVE PRIVATE LIMITED
PROP.- DIR.- CHUNCHUN KUMAR & OTHERS

PREPARED BY:- PRAVIN KUMAR SINHA
REGD. NO.- RQP/BIH/SR.NO.20
LETTER NO. 3825 DATED 07/11/2019

SIGNATURE :



CONVENTIONAL SYMBOLS

Express highway, with bridge, with distance stone
Roads, metalled according to importance
Roads, double carriageway, according to importance
Unmetalled road, Cart track, Pack-track with pass, Foot path
Streams, with pack in bed, undefined, Canal
Dams, masonry or embankment, earthback, Weir
River, dry with water channel, with island & rocks, Tidal river
Submerged rocks, Shoal, Swamp, Reeds
Wells, lined, unlined, Tube-well, Spring, Tanks, perennial, dry
Embankments, road or rail, tank, Broken ground
Railways, broad gauge, double, single with station, under construction
Railways, other gauges, double, single with distance stone, etc
Mineral line or tramway, Mine, Quarry with tunnel
Contours with sub features, Rocky slopes, Cliffs
Sand features (1 flat, 2 sand hills permanent, 3 dunes shifting)
Towns or villages, inhabited, deserted, Fort
Hills, permanent, temporary, Tower, Antiquities
Temple, Chhatri, Church, Mosque, Idgah, Tomb, Graves
Lighthouse, Lightship, Buoys, lighted, unlighted, Anchorage
Mine, Vine on trellis, Grass, Scrub
Palms, palmyra, date, Plantain, Conifer, Bamboo, Other trees
Areas, cultivated, wooded, Surveyed tree
Boundary, international
" state, demarcated, undemarcated
" district, subdivision, tahsil or taluk, forest
Boundary pillars, surveyed, unsurveyed
Heights, triangulated, station, point, approximate
Benchmark, geodetic, tertiary, canal
Post office, Telegraph office, Overhead tank
Rest house or Inspection bungalow, Circuit house, Police station
Camping ground, Forest reserved, protected
Selected names, administrative, locality or tribal
Hospital, Dispensary, Veterinary Hospital / Dispensary
Aerodrome, Helipad, Tourist site
Power line, with pylons surveyed, with poles unsurveyed

KEY PLAN

PAROREIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PAROREIYA,BLOCK MESKAPUR,
DIST- SUPAUL (BIHAR)

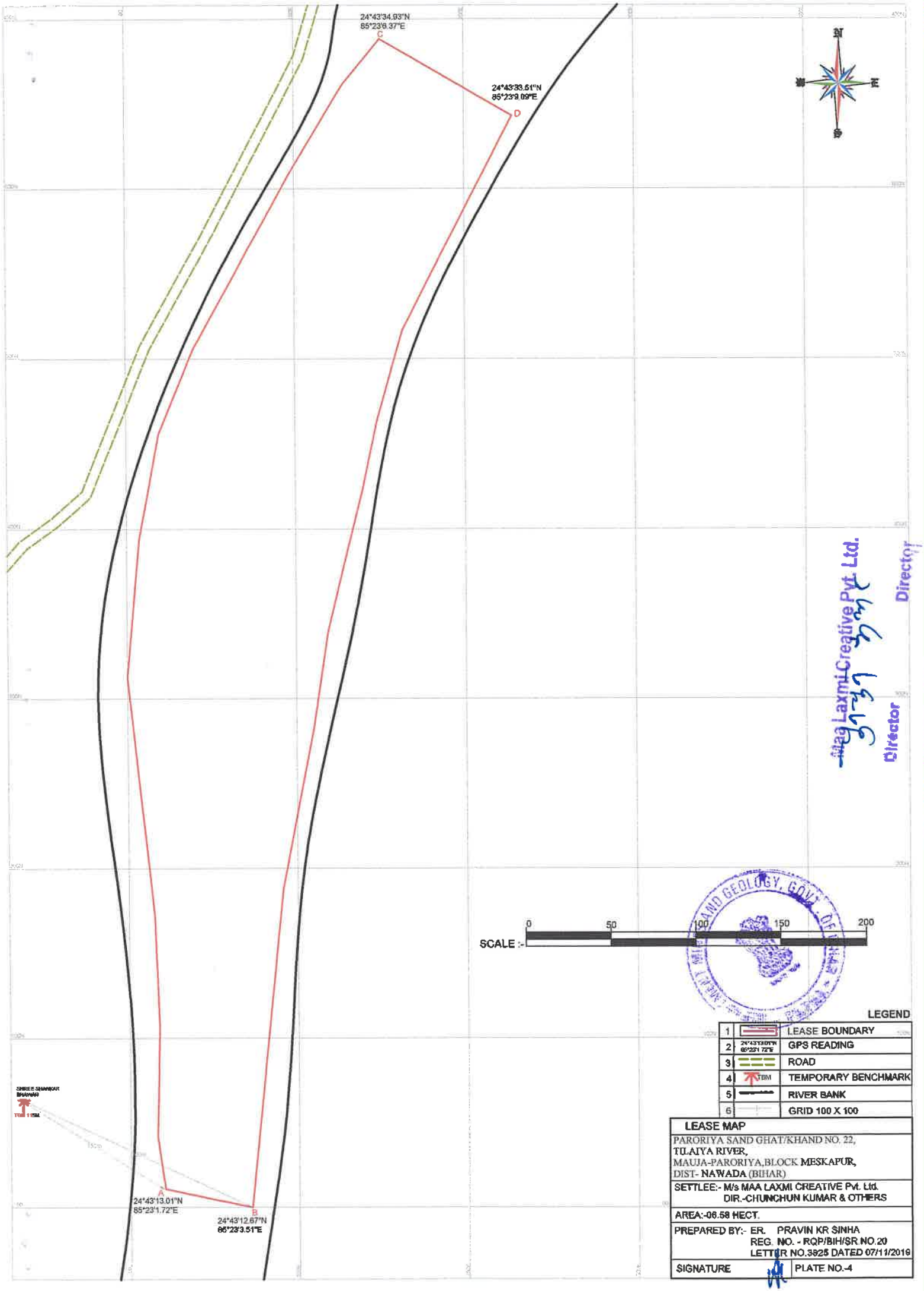
SETTLEE:-:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS

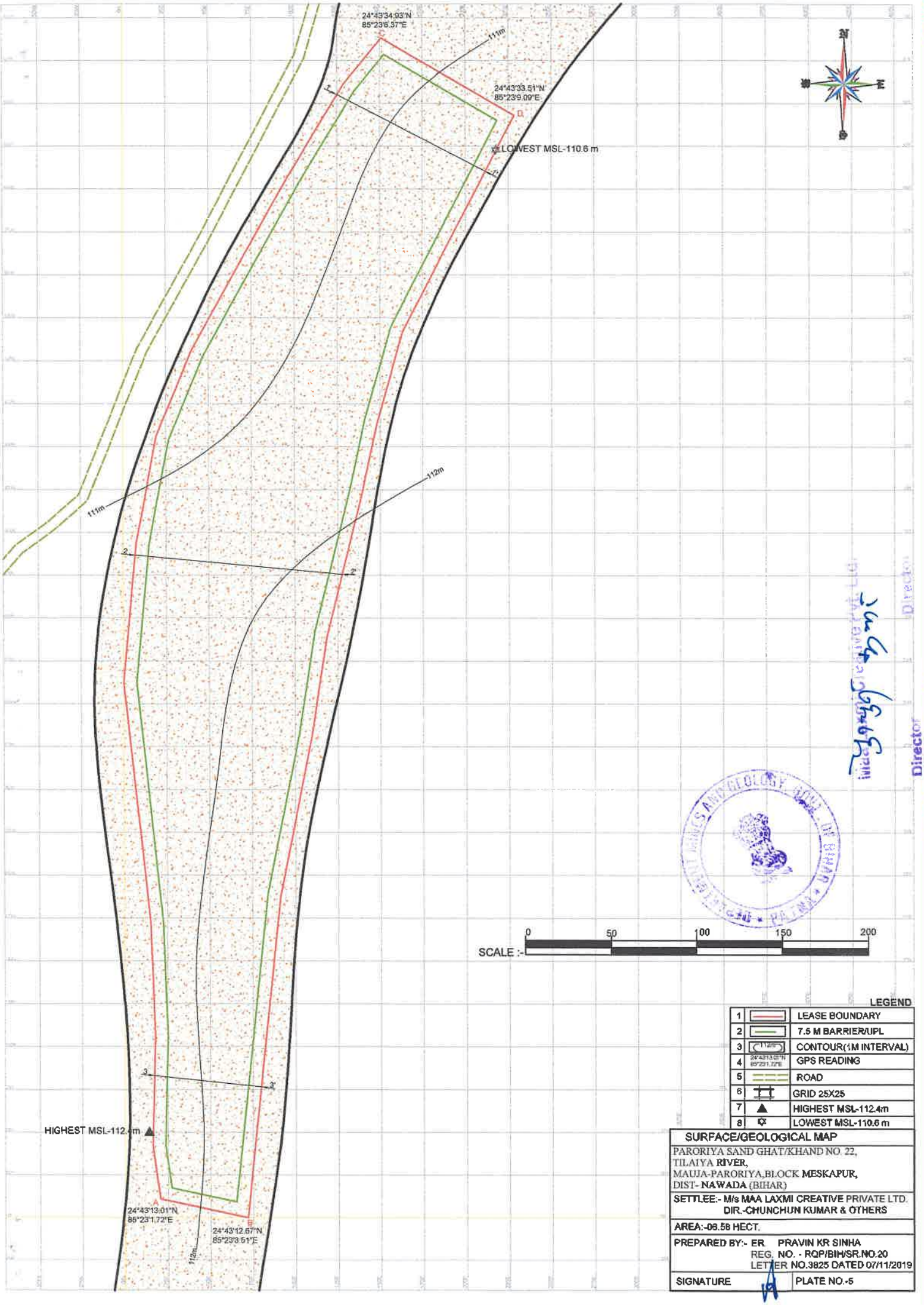
AREA:-06.58 HECT.

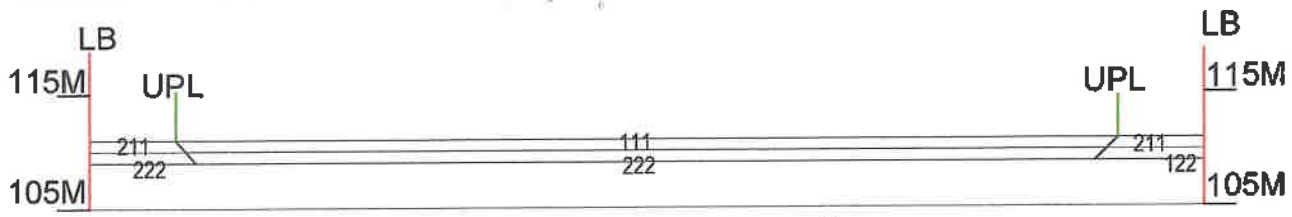
PREPARED BY :- ER. PRAVIN KUMAR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019

SIGNATURE

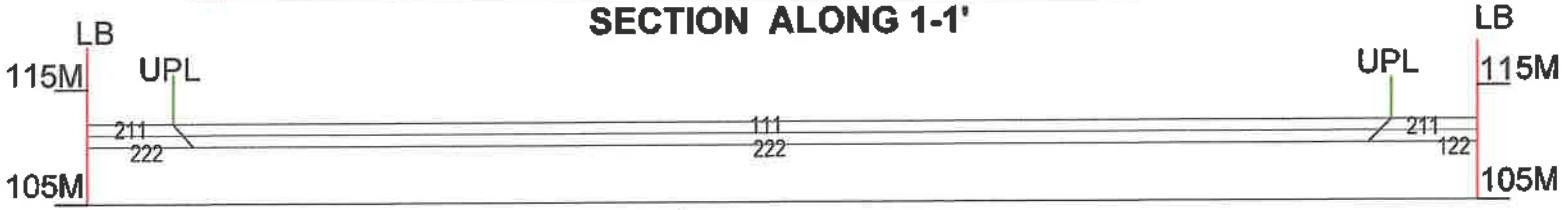
PLATE NO.-2


24°43'34.93"N
85°23'6.37"E
C
24°43'33.51"N
85°23'9.09"E
D
N
W
E
S
SCALE :-
0
50
100
150
200
SHREE SHANKAR BHAWAN
TBM 115M
A
24°43'13.01"N
85°23'1.72"E
B
24°43'12.67"N
85°23'3.51"E
LEGEND
1 LEASE BOUNDARY
2 24°43'13.01"N 85°23'1.72"E GPS READING
3 ROAD
4 TBM TEMPORARY BENCHMARK
5 RIVER BANK
6 GRID 100 X 100
LEASE MAP
PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)
SETTLEE:- M/s MAA LAXMI CREATIVE Pvt. Ltd.
DIR.-CHUNCHUN KUMAR & OTHERS
AREA:-06.58 HECT.
PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3925 DATED 07/11/2019
SIGNATURE
PLATE NO.-4
Maa Laxmi Creative Pvt. Ltd.
Director
Director

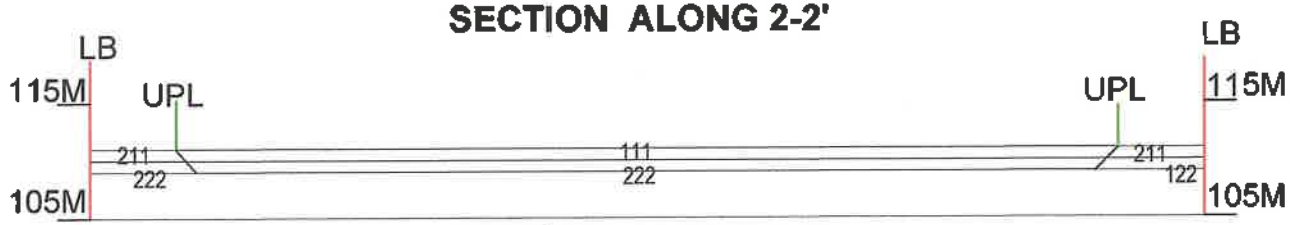

24°43'34.93"N
85°23'6.37"E
C
111m
24°43'33.51"N
85°23'9.09"E
D
LOWEST MSL-110.6 m
1
1'
112m
111m
2
2'
3
3'
HIGHEST MSL-112.4m
24°43'13.01"N
85°23'1.72"E
A
24°43'12.67"N
85°23'3.51"E
B
112m
N
W
E
S
SCALE :-
0
50
100
150
200
LEGEND
1 LEASE BOUNDARY
2 7.5 M BARRIER/UPL
3 CONTOUR(1M INTERVAL)
4 GPS READING
5 ROAD
6 GRID 25X25
7 HIGHEST MSL-112.4m
8 LOWEST MSL-110.6 m
SURFACE/GEOLOGICAL MAP
PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS
AREA:-06.58 HECT.
PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019
SIGNATURE
PLATE NO.-5
Director
Director



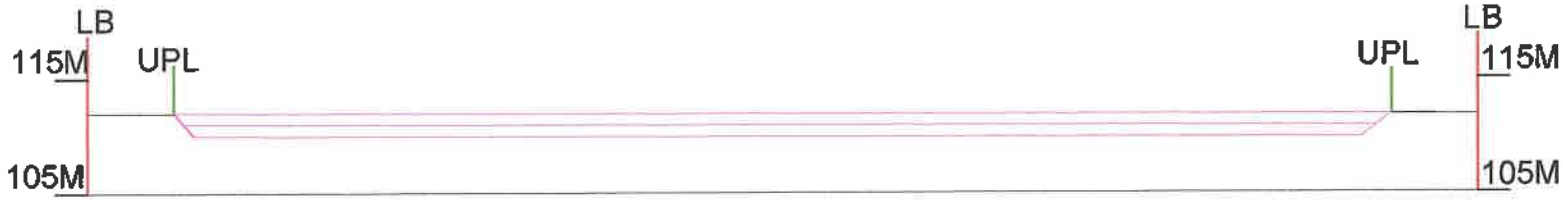
SECTION ALONG 1-1'



SECTION ALONG 2-2'



SECTION ALONG 3-3'



SECTION ALONG A-B

1		LEASE BOUNDARY(LB)
2		7.5 M BARRIER/UPL
3	R	ROAD
4	111	PROVED RESERVE(111)
5	122	PROBABLE RESERVE(122)
6	211	FEASIBILITY RESOURCE (211)
7	222	PRE FEASIBILITY RESOURCE (222)

Director

GEOLOGICAL/PIT SECTION

PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)

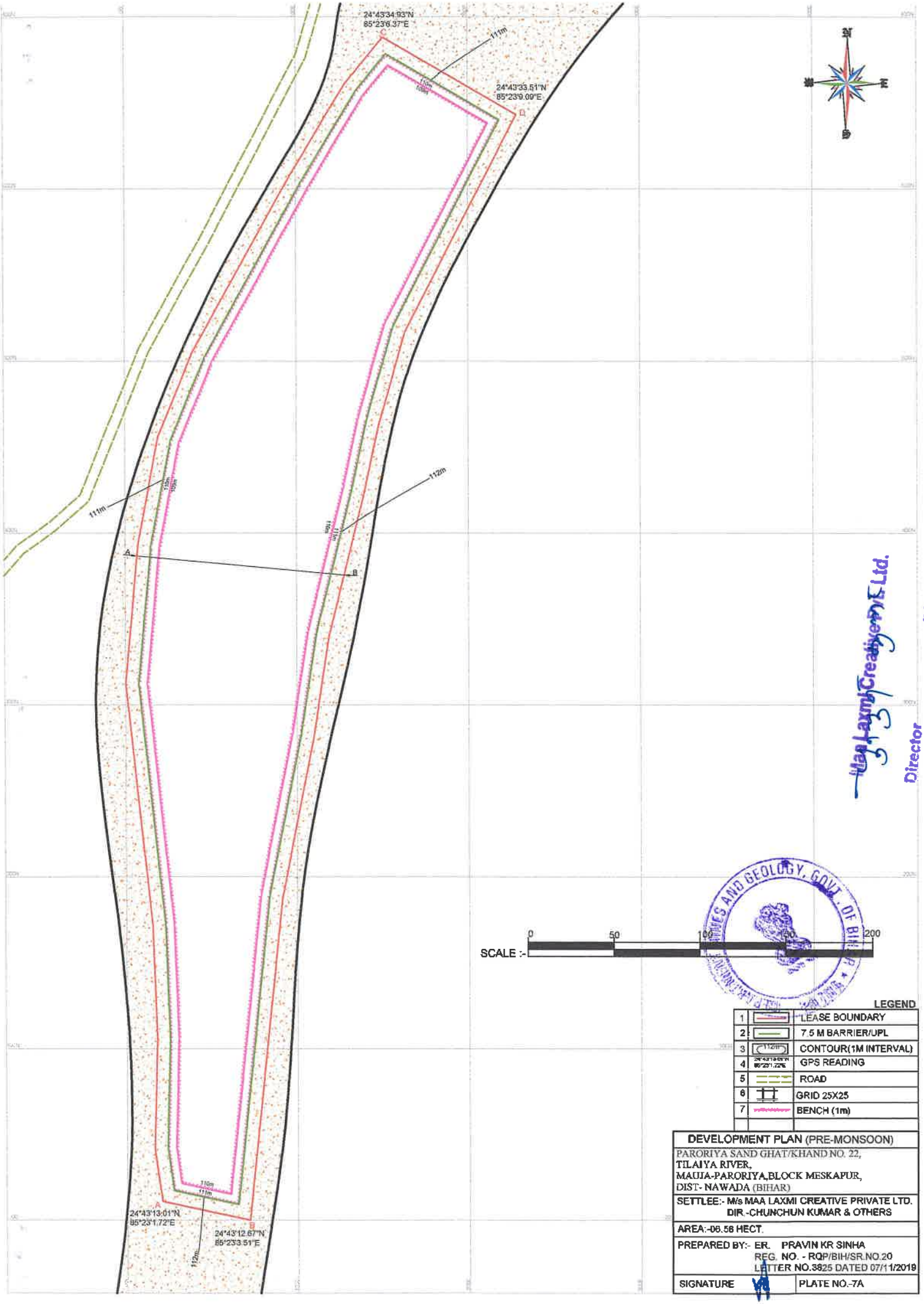
APPLICANT:- M/s MAA LAXMI CREATIVE PRIVATE LTD
DIR.-CHUNCHUN KUMAR & OTHERS

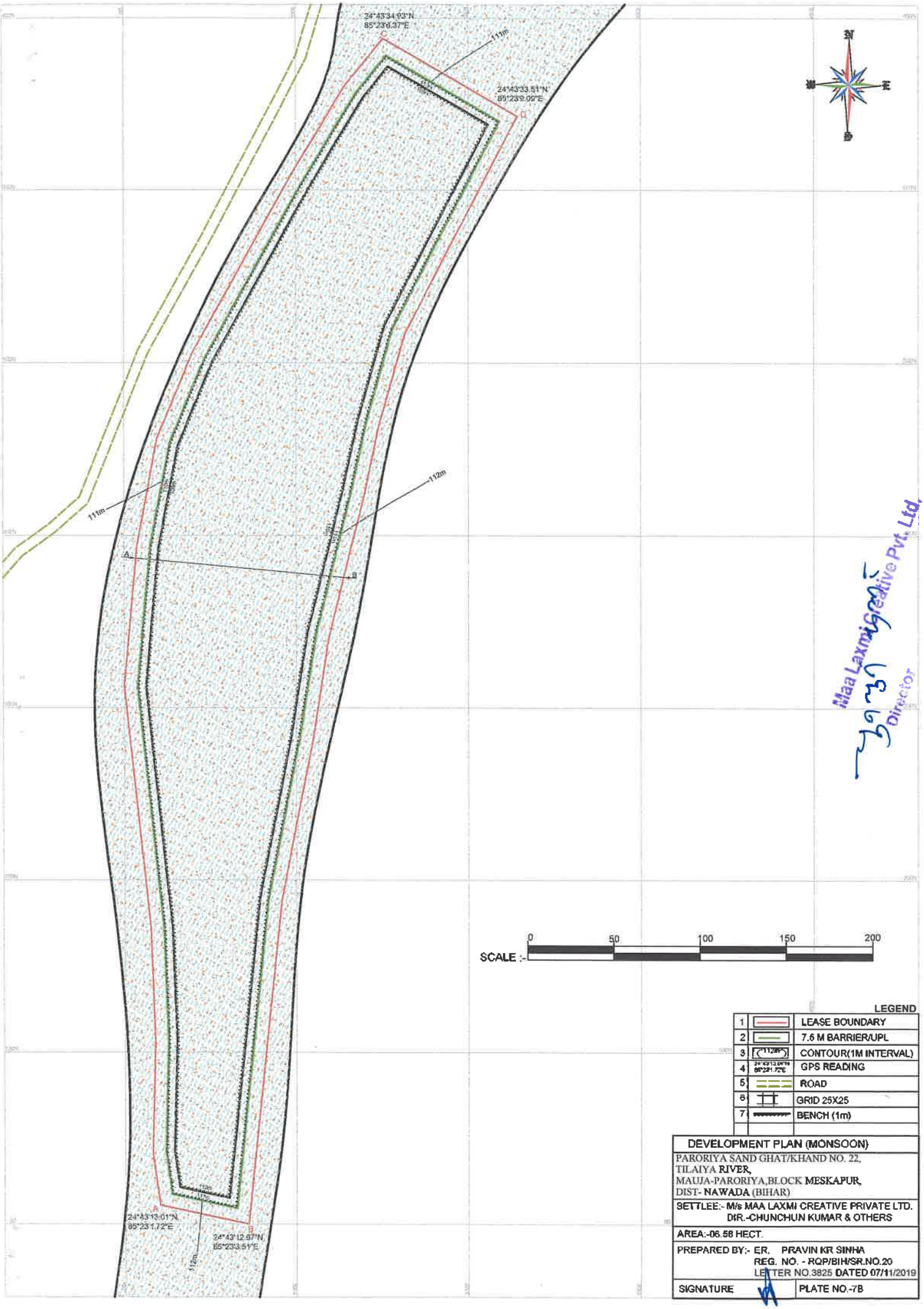
AREA:-06.58 HECT.

PREPARED BY :- PRAVIN KUMAR SINHA
REGD. NO. RQP/JBP/129/2011/A

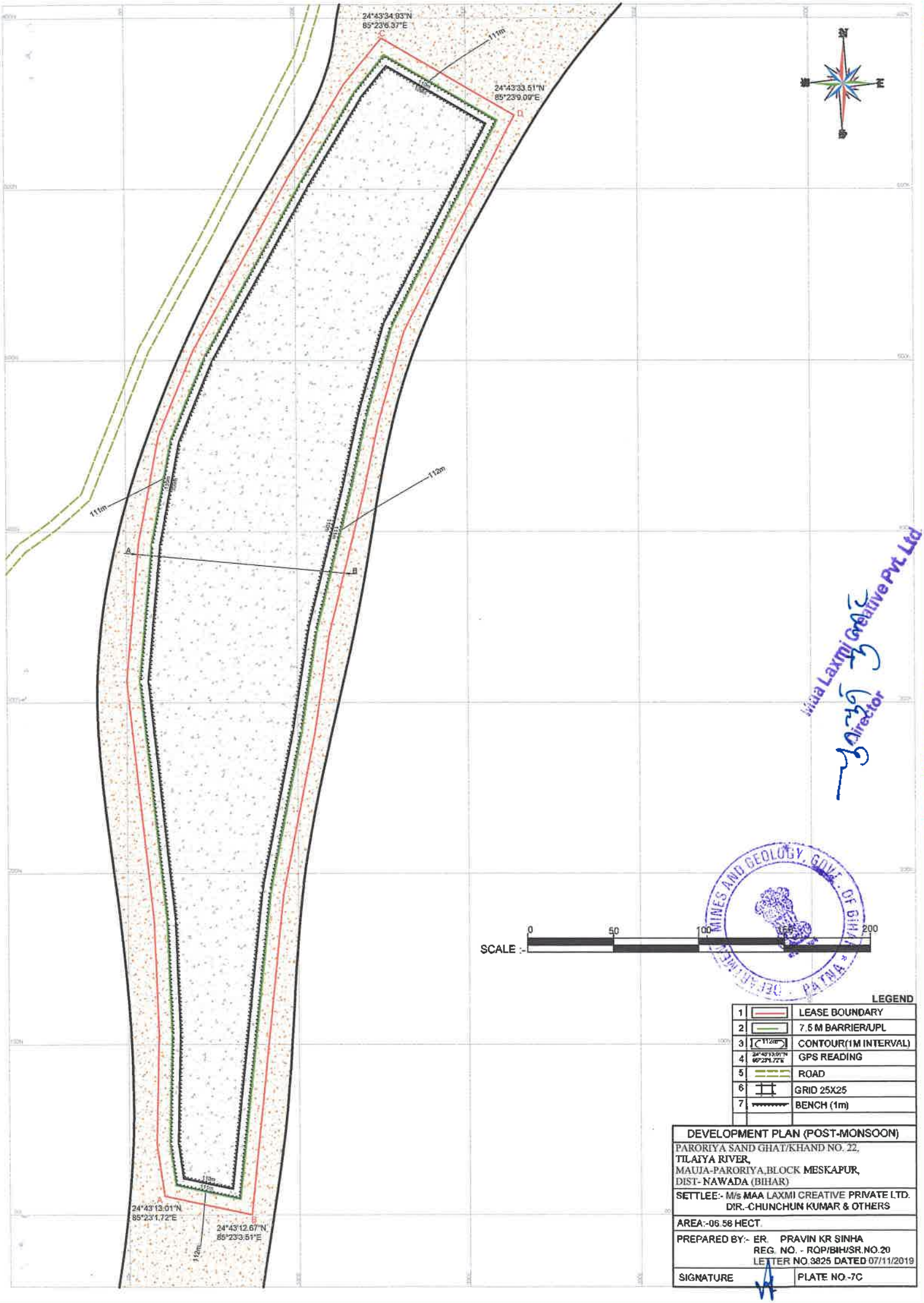
SIGNATURE

PLATE NO.-6


24°43'34.93"N
85°23'6.37"E
C
111m
24°43'33.51"N
85°23'9.09"E
D
N
W
E
S
111m
112m
A
B
24°43'13.01"N
85°23'1.72"E
24°43'12.67"N
85°23'3.51"E
112m
SCALE :-
0
50
100
200
LEGEND
1 LEASE BOUNDARY
2 7.5 M BARRIER/UPL
3 CONTOUR(1M INTERVAL)
4 GPS READING
5 ROAD
6 GRID 25X25
7 BENCH (1m)
DEVELOPMENT PLAN (PRE-MONSOON)
PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS
AREA:-06.56 HECT.
PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019
SIGNATURE
PLATE NO.-7A
Maa Laxmi Creative Pvt. Ltd.
Director
MINES AND GEOLOGY, GOVT. OF BIHAR



DEVELOPMENT PLAN (MONSOON)	
PARORIYA SAND GHAT/KHAND NO. 22, TILAIYA RIVER, MAUJA-PARORIYA,BLOCK MESKAPUR, DIST- NAWADA (BIHAR)	
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD. DIR.-CHUNCHUN KUMAR & OTHERS	
AREA:-06.56 HECT.	
PREPARED BY:- ER. PRAVIN KR SINHA REG. NO. - RQP/BIH/SR.NO.20 LETTER NO.3825 DATED 07/11/2019	
SIGNATURE	PLATE NO.-7B



DEVELOPMENT PLAN (POST-MONSOON)

PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)

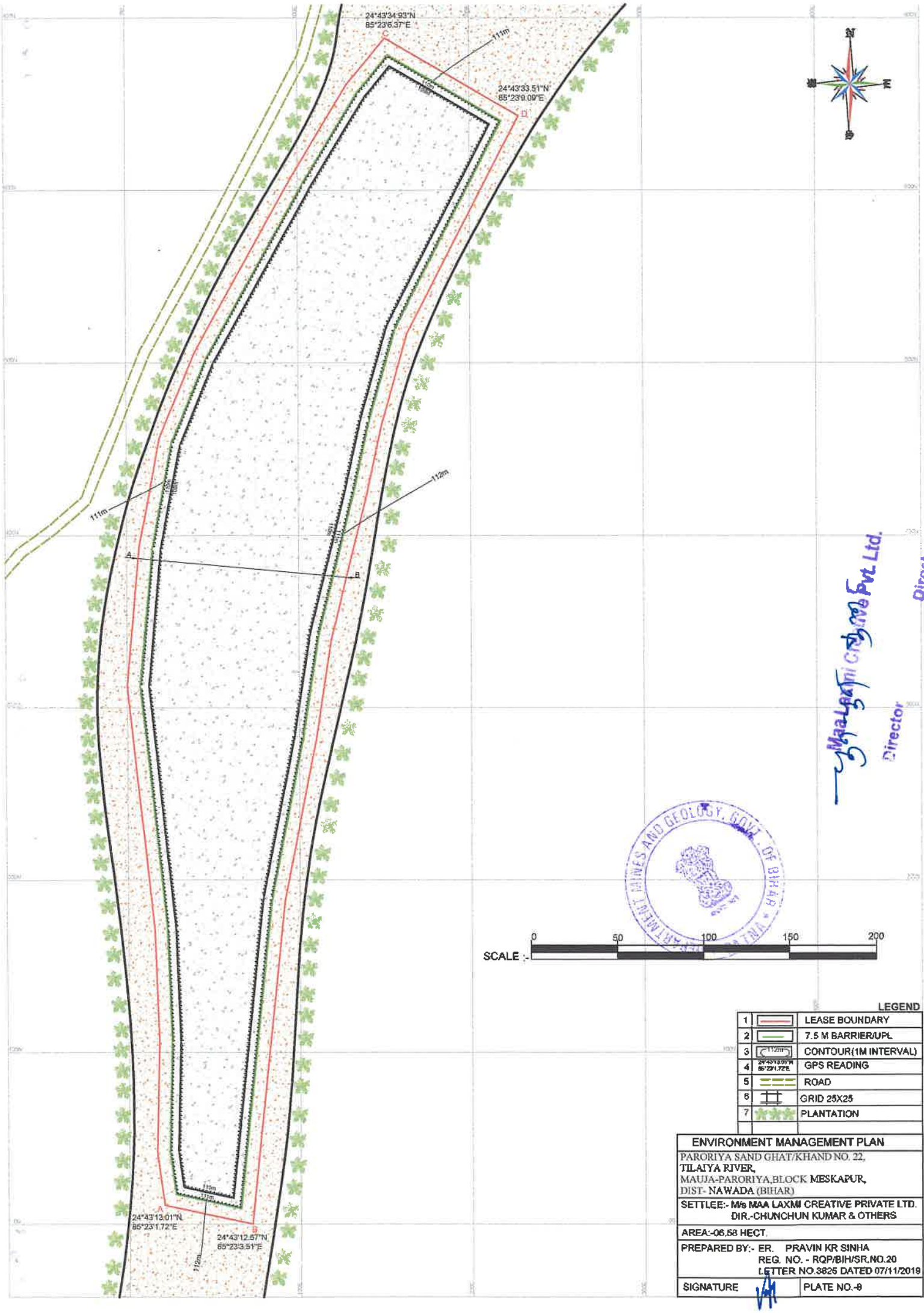
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS

AREA:-06.58 HECT.

PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - ROP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019

SIGNATURE

PLATE NO.-7C


24°43'34.93"N
85°23'6.37"E
C
111m
24°43'33.51"N
85°23'9.09"E
D
N
W
E
S
112m
111m
A
B
24°43'13.01"N
85°23'1.72"E
24°43'12.67"N
85°23'3.51"E
112m
SCALE :-
0
50
100
150
200
LEGEND
1 LEASE BOUNDARY
2 7.5 M BARRIER/UPL
3 CONTOUR(1M INTERVAL)
4 GPS READING
5 ROAD
6 GRID 25X25
7 PLANTATION
ENVIRONMENT MANAGEMENT PLAN
PARORIYA SAND GHAT/KHAND NO. 22,
TILAIYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS
AREA:-06.58 HECT.
PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019
SIGNATURE
PLATE NO.-8
Maa Laxmi Creative Pvt. Ltd.
Director
Director
DEPARTMENT MINES AND GEOLOGY, GOVT. OF BIHAR
PATNA

24°43'34.93"N
85°23'6.37"E
C
111m
24°43'33.51"N
85°23'9.09"E
D
N
W
E
S
111m
112m
A
B
24°43'13.01"N
85°23'1.72"E
24°43'12.67"N
85°23'3.51"E
112m
SCALE :-
0
50
100
150
200
LEGEND
1 LEASE BOUNDARY
2 7.5 M BARRIER/UPL
3 CONTOUR(1M INTERVAL)
4 GPS READING
5 ROAD
6 GRID 25X25
7 BENCH (1m)
PROGRESSIVE MINE CLOSURE PLAN
PARORIYA SAND GHAT/KHAND NO. 22,
TILAJYA RIVER,
MAUJA-PARORIYA,BLOCK MESKAPUR,
DIST- NAWADA (BIHAR)
SETTLEE:- M/s MAA LAXMI CREATIVE PRIVATE LTD.
DIR.-CHUNCHUN KUMAR & OTHERS
AREA:-06.58 HECT.
PREPARED BY:- ER. PRAVIN KR SINHA
REG. NO. - RQP/BIH/SR.NO.20
LETTER NO.3825 DATED 07/11/2019
SIGNATURE
PLATE NO.-9
DEPARTMENT MINES AND GEOLOGY, GOVT. OF BIHAR * PATNA *
Maa Laxmi Creative Pvt. Ltd.
Director