

**BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA**

Original Application No.59/2025/EZ

Youth United for Sustainable Environment Trust

...Applicant

-Versus-

State of Odisha & Ors.

...Respondents

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Cuttack
Date:18.12.2025


(SANJIB SWAIN)
ADDL. GOVT. ADVOCATE

**PBEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA**

Original Application No.59/2025/EZ



Youth United for Sustainable Environment Trust

...Applicant

-Versus-

State of Odisha & Ors.

...Respondents

**ADDITIONAL AFFIDAVIT
ON BEHALF OF RESPONDENT No-3 & 5**

I, Sri Jayaprakash Nayak, aged about 36 years, S/o-Subash Chandra Nayak presently posted at O/o the Deputy Director of Mines, Jajpur Circle, Jajpur, At/P.O/Dist.- Jajpur as Deputy Director of Mines (I/C), Jajpur Circle do hereby solemnly affirm and state as follows: -

1. That, I am the Opp. Party No. 5 in the aforesaid Original Application and authorised by the Collector & District Magistrate, Jajpur-Respondent No.3 to file Counter Affidavit in the said O.A. I have gone through the Original Application and understood the contents thereof. I am otherwise well acquainted with the facts of the present case.
2. That, it is humbly submitted before the Hon'ble Tribunal that the present Affidavit is being filed as an additional Affidavit to the previous Counter Affidavit filed on dated 16.07.2025.
3. That, in compliance to the Letter No.5012 dated 16.12.2024 and Letter No.5142 dated 20.12.2024 (**ANNEXURE-F SERIES of the previous affidavit**) of the Mining Officer, Jajpur District, M/s. TKS Consultancy

Surendra Prasad Dhai
Advocate
NOTARY, CUTTACK

21/8.12.2025

Jayaprakash Nayak
DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

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Services, Bhubaneswar has submitted the vetted volume assessment report of Brahmani River Sand Bed Pankapala-I & Brahmani River Sand Bed Pankapala-II through Odisha Space Application Center (ORSAC), Bhubaneswar vide Letter No.2852⁽³⁾ dated 16.07.2025.

Copies of the Letter No.2852⁽³⁾ dated 16.07.2025 along with the volume assessment report of Brahmani River Sand Bed Pankapala-I & II is enclosed herewith as **ANNEXURE-Q/5 SERIES**.

4. That, the above Assessment Report reveals as follows:-

(a) **Brahmani River Sand Bed Pankapala-I** : The survey conducted on dated 02.04.2025 and the analysis reveals that, no sand excavation has been observed within the 50 m buffer zone outside the mining lease area of the Pankapala-I Sand Bed. As a result, no sand extraction volume has been estimated in the buffer zone of Pankapala-I Sand Bed.

(b) **Brahmani River Sand Bed Pankapala-II** : The survey conducted on dated 02.04.2025 and the analysis reveals that total 2089.04 Cu m of sand has been excavated from the buffer zone of Pankapala-II Sand Bed.

5. That accordingly, a show-cause Notice vide Letter No.7379, dated 05.12.2025 has been issued by the Mining Officer, Jajpur District to Sri Daitari Dhal-lessee of Brahmani River Sand Bed Pankapala-II as to why an amount of **Rs.10,87,545/- (Rupees Ten Lakh Eighty Seven Thousand Five Hundred Forty Five)** only shall not be imposed on him for unauthorised extraction of **2089.04 Cu m** of sand from the buffer zone of Brahmani River Sand Bed Pankapala-II.

Surendra Prasad Dha
Advocate
NOTARY, CUTTACK

Jayaprakash Nayak
DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

-X-

A copy of the Letter No.7379, dated 05.12.2025 of the Mining Officer, Jajpur District is enclosed herewith as ANNEXURE-R/5.

6. That, in reply to the above show-cause notice, the lessee submitted the show-cause reply dated 06.12.2025 received on dated 09.12.2025 wherein he has disputed and denied the unauthorised extraction of **2089.04 Cu m** of sand from the buffer zone of Brahmani River Sand Bed Pankapala-II stating that, *“the assessment was conducted on 02.04.2025 while his agreement with the Competent Authority executed on 19.03.2025 and actual work commenced on 13.04.2025. Hence, the alleged extraction, if any, before 13.04.2025, does not pertain to my period of operation and has not been executed under my supervision or responsibility”*.

Copy of the above show-cause reply dated 06.12.2015 is enclosed herewith as ANNEXURE-S/5.

7. That, the above show-cause reply being devoid of merit, and considering principle of natural justice, the lessee has been intimated for a final opportunity of hearing by the Mining Officer, Jajpur District vide Letter No.7518, dated 12.12.2025. The final decision on the show-cause reply shall be taken after the hearing and accordingly, necessary steps shall be taken as per OMMC (Amendments) Rules, 2025.

A copy of the Letter No.7518, dated 12.12.2025 of the Mining Officer, Jajpur district is enclosed herewith as ANNEXURE-T/5.

8. That, in compliance to the Letter No.3027, dated 19.05.2025 and Letter No.4350, dated 10.07.2024 issued by the Mining Officer, Jajpur District (**ANNEXURE-J SERIES of the previous affidavit**), M/s. Areal

Surendra Prasad Dhol
Advocate
NOTARY, CUTTACK

Jayaprakash Nayak
DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR



Constructions & Geo-India Services has submitted the volume assessment report of Pankapala-I & Pankapala-II Sand Quarry. But as the said report has not been vetted from Odisha Space Application Centre (ORSAC), the agency has been requested vide Letter No.7381, dated 05.12.2025 by the Mining Officer, Jajpur District, to submit the said report vetted from ORSAC at the earliest for further necessary action.

A copy of the Letter No.7381 dated 05.12.2025 of the Mining Officer, Jajpur district is enclosed herewith as ANNEXURE-U/5.

- 9. That after receipt of the vetted volume assessment report of Pankapala-I & Pankapala-II Sand Quarry from ORSAC, the same shall be submitted before the Hon'ble Tribunal.
- 10. That the statements made in the present affidavit are true to the best of my knowledge and belief as per information derived from the official records and statements.
- 11. This is for humble submission before the Hon'ble National Green Tribunal, Eastern Zone, Kolkata.

Identified by

Sanjib Swain
Addl. Govt. Advocate

Jayaprakash Nayak

DEPONENT

DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

CERTIFICATE

Certified that the cartridge papers are not available.

Sanjib Swain
(SANJIB SWAIN)
ADDL. GOVT. ADVOCATE

Cuttack
Date:18.12.2025

The above named Deponem
Solemnly affirm on.....
.....Being Identified
by.....

21/12/2025
Surendra Prasad Dhal
Advocate-
NOTARY, CUTTACK





~~-X-~~ ANNEXURE - 8/5 Series
ODISHA SPACE APPLICATIONS CENTRE (ORSAC)

Department of Science & Technology, Government of Odisha

19.07.2025 616

ORSAC/PR/1271/2025/ 2852⁽³⁾ DL-16/7/2025

To,
The Deputy Director of Mines (I/C)
Jajpur Circle, Jajpur
E-mail: ddmjajpur.mm@gov.in

Sub- Supply of vetted Drone surveyed output for 2 nos of minor mineral sources.

Ref- Your letter No-5146/MM, Jajpur, Dated-20.12.2024

Sir,

In inviting reference to the letter and subject cited above, please find enclosed herewith the Drone survey output reports in respect of 02 nos (Brahmani river sand bed Pankapala-I & Pankapala-II Under Danagadi Tahasil) of minor mineral sources in jajpur District.

Thanking you,

Enc: - 02 no's report.

Yours Faithfully,

Ceeanugo
SCIENTIST-D

Copy to: 1) The Director, Minor Minerals, Odisha for kind information.
2) M/s TKS Consultancy Services for information.

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19-07-2025

Hoyal
DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY
EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI
RIVER SAND BED PANKAPAL-I**

UNDER DANAGADI TAHASIL OF JAJPUR DISTRICT, ODISHA

Work Order No. 5142/MM, JAJPUR, Dt. 20/12/2024

(Date of Drone Survey: 02.04.2025)

(Use of UAV/Drone, DGPS Survey Techniques adopted)

Prepared By:



M/S TKS CONSULTANCY SERVICES

Plot No-3153/14698, Pandara, Unit - II-38,
Near Second Wife Kitchen, Rasulgarh,
Bhubaneswar, Khordha, Odisha-751010
E-mail: tkscsbbs@gmail.com
Contact: +91 8249834881

An ISO 9001:2015 Certified Consultancy
AN ORSAC EMPANELLED AGENCY


DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

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LIST OF ANNEXURES

DESCRIPTION	<u>ANNEXURE NO.</u>
Copy of Letter from Mining Officer, Jajpur to M/s. TKS Consultancy Services for Volume Assessment Report.	I


 DEPUTY DIRECTOR OF MINES (I/C)
 JAJPUR CIRCLE, JAJPUR

**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.**

1. Introduction:

The Mining Officer, Jajpur District, issued a letter to M/s. TKS Consultancy Services vide Letter No. 5142/MM,Jajpur, dated 20.12.2024, for Volume assessment of Unauthorisedly excavated sand from the buffer zone of Brahmani River Sand Bed Pankapal-I. The lease area was surveyed using Drone and DGPS to carry out a detailed volume assessment. For calculating the volume, a 50-meter buffer zone from the mining lease boundary of Pankapal-I Sand Bed was considered as per the Standard Operating Procedure (SOP) issued by ORSAC for drone-based replenishment studies.

2. Location of the Area:

The Lease area is located at latitude between 20° 53' 10.685" N to 20° 53' 16.274" N and longitude 86°1'31.790"E to 86°1'41.684"E.

The details of Boundary pillar coordinates are given below the table.

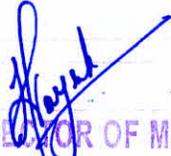
PILLAR COORDINATES		
PO_ID	LONGITUDE	LATITUDE
A	86° 1' 31.928" E	20° 53' 11.079" N
B	86° 1' 31.790" E	20° 53' 16.274" N
C	86° 1' 41.672" E	20° 53' 16.126" N
D	86° 1' 41.684" E	20° 53' 10.685" N

3. Land Schedule:

The lease area is lies in the village Pankapal, under Danagadi Tahasil of Jajpur district, Odisha. Bearing Khata No. 224, Plot No.-1075

DGPS SURVEY SOURCE AREA

Name of the Quarry	Mouza	Khata No.	Plot No.	Area in (Acres)	Kisam
Pankapal-I Sand Quarry	Pankapal	224	1089(P)	12.30	NADI
Total Area				12.30	


DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.**

4. Equipment for Survey and Data Processing

(i) DRONE SPECIFICATION

Item (Model)	Manufacture	
Drone	CBAI	
Payload	RGB Camera (20 Megapixel)	
Flying Height	100 meters	
Speed	10m/s	
Front overlap	70%	
Side Overlap	75%	

TABLE-1: -LIST OF HARDWARE EQUIPMENT'S

(ii) DGPS Description

Sl. No	Particulars	Description	Product Image
1	DGPSdevice	TrimbleR12integratedGNSSSystem	
2	No.ofChannels	672	
3	Antenna	Integrated	
4	Frequencysused	GPS L1&L2, GLONASS F1&F2 Asia-Pacific version: GPSL1&L2, BEIDOU B1&B2	
5	Horizontal accuracy	8mm RTK	
6	Vertical accuracy	15mmRTK	
7	Controller	TrimbleTSC7 Controller	

TABLE-2: - LIST OF HARDWARE EQUIPMENT'S

(iii)

Software

Software Used	Serial No/Version	Purpose of Use
Trimble Business Center	5.0	DGPS Data processing
Pix4D mapper	4.8.4	Drone Data processing
Auto Cad Map	2024	Preparation of Section
Global Mapper	2023	Preparation. of Surface & Contour
Microsoft office	2023	Report Preparation

TABLE-3: - LIST OF SOFTWARE USED

VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.

5. Data & Methodology:

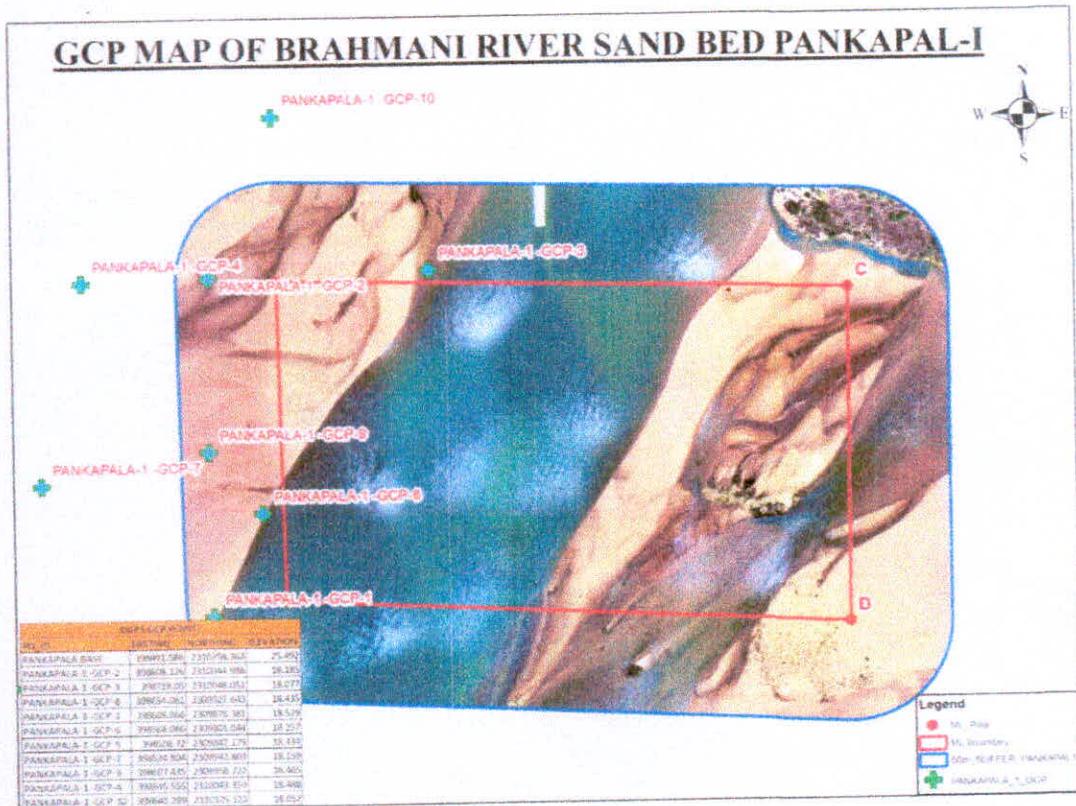
The Mining Officers issue work orders for the assessment of reserves and replenishment studies within their respective jurisdictions, along with relevant lease information. Upon receiving the work order, the consultancy verifies and validates the lease information to ensure accuracy. Any data gaps identified during this process are discussed and resolved in coordination with the concerned Mining Officers. The following methodology has been adopted for the study:

i. DGPS Survey

To ensure accuracy and reliability in DGPS-based surveys, the primary control point coordinates are provided by ORSAC.

a) Ground Control Point:

Ground Control Points (GCPs) were established to ensure precise horizontal and vertical positioning for accurate geospatial mapping. These GCPs were strategically placed and linked to a reference network to enhance the accuracy of drone imagery processing; the list of GCPs is given below:



[Signature]
 DEPUTY DIRECTOR OF MINES (IC)
 JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.**

GCP COORDINATES			
PO_ID	EASTING	NORTHING	ELEVATION
PANKAPALA.BASE	398491.586	2310258.363	25.492
PANKAPALA-1 -GCP-2	398608.126	2310044.988	18.185
PANKAPALA-1 -GCP-3	398718.05	2310048.051	18.077
PANKAPALA-1 -GCP-8	398634.081	2309927.643	18.435
PANKAPALA-1 -GCP-1	398608.866	2309876.381	18.529
PANKAPALA-1 -GCP-6	398568.086	2309801.044	18.257
PANKAPALA-1 -GCP-5	398508.72	2309842.179	18.434
PANKAPALA-1 -GCP-7	398524.804	2309942.803	18.159
PANKAPALA-1 -GCP-9	398607.435	2309958.722	18.465
PANKAPALA-1 -GCP-4	398545.555	2310043.359	18.488
PANKAPALA-1 -GCP-10	398640.289	2310125.123	18.052

Table 4: GCP used for Image Processing

b. Process of Drone Survey & Data Validation

Drone mapping, also known as aerial mapping or photogrammetry, is a method of creating accurate maps, models, and surveys using unmanned aerial vehicles (UAVs) equipped with cameras or sensors. The process involves several key steps:

- **Mission Planning:** After demarcation of GCP in the ground using RTK method, Determine the area to be mapped and drone flew over the lease area with 100 meters buffer for zone safe side. plan the flight mission, taking into account factors such as weather conditions, airspace restrictions, and flight parameters.
- i. **Equipment Setup:** Prepare the drone and its payload, ensuring the camera or sensor is properly calibrated and functioning correctly. Set up ground control points (GCPs) if high-precision mapping is required.
- ii. **Flight Execution:** The drone flies in a systematic pattern, capturing overlapping images with around 75% overlap both side and forward of the area of interest. The flight pattern can be predefined using automated flight planning software to ensure comprehensive coverage.
- iii. **Data transfer & Backup-** Download image and sensor data from the drone & back up data securely.
- iv. **Data Processing & Analysis-** Using PIX4D application data processed with referenced to the GCP and generated True ortho, DTM, DSM & Point Clouds
- v. Checked the quality of the data and submitted the Raw & Processed data in defied SOP to the nodal agency (ORSAC) for Vetting.
- vi. After successful vetting of the data ORSAC certifies accuracy of the data.

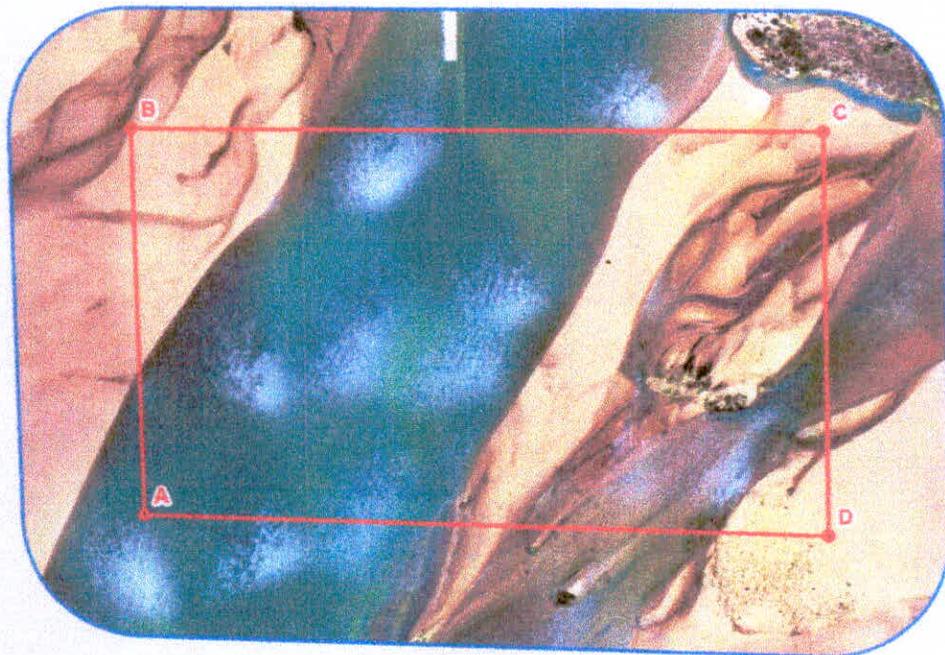
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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.**

Output:

- **High-resolution ortho photo**
A geometrically corrected aerial image with consistent scale, providing accurate representation and enabling direct measurements. Used for land planning, environmental monitoring, and infrastructure management.
- **Accurate and Geo-referenced imagery**
Imagery aligned with geographic coordinates for integration into GIS systems. Ensures precise mapping and measurement, useful for land surveying, construction, and resource management.

ORTHO MAP OF BRAHMANI RIVER SAND BED PANKAPAL-I

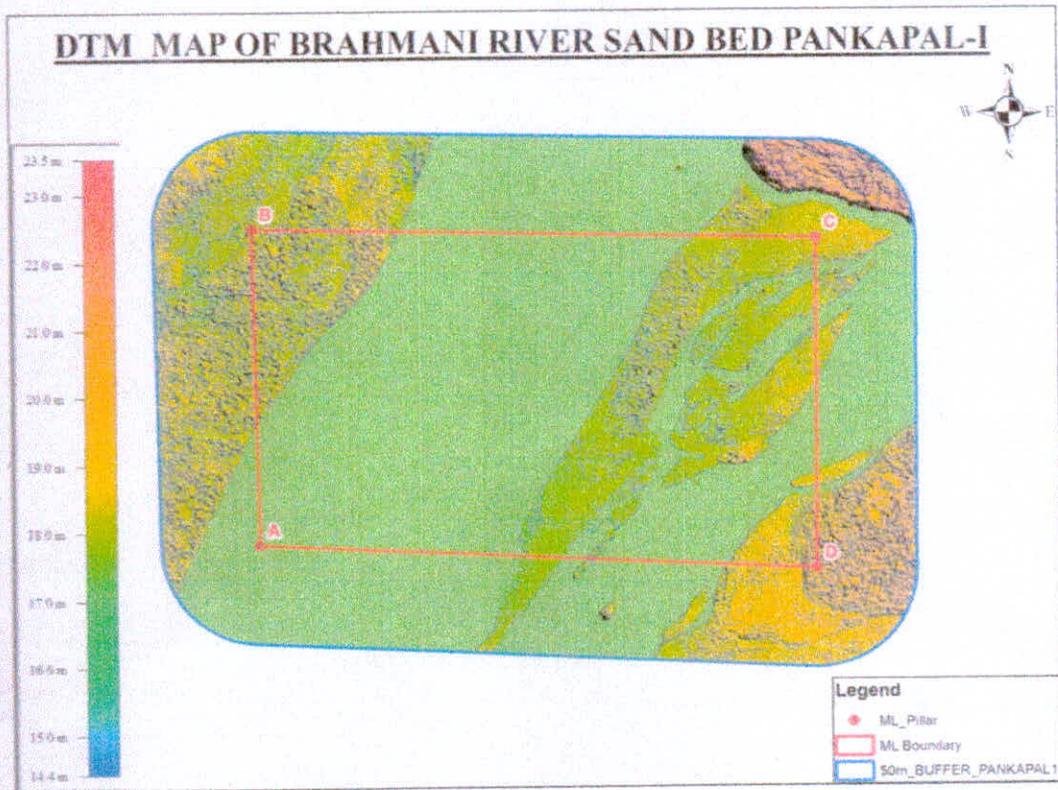
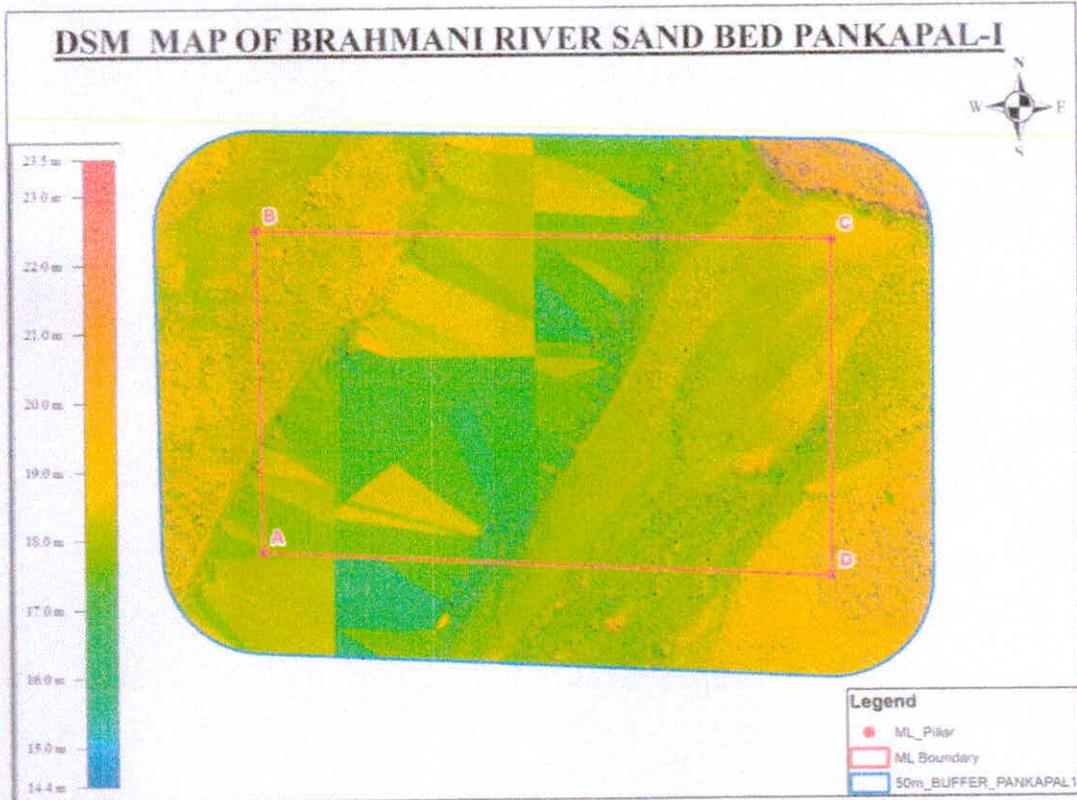


Legend	
●	ML_Pillar
□	ML Boundary
□	50m_BUFFER_PANKAPAL1

[Signature]
DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

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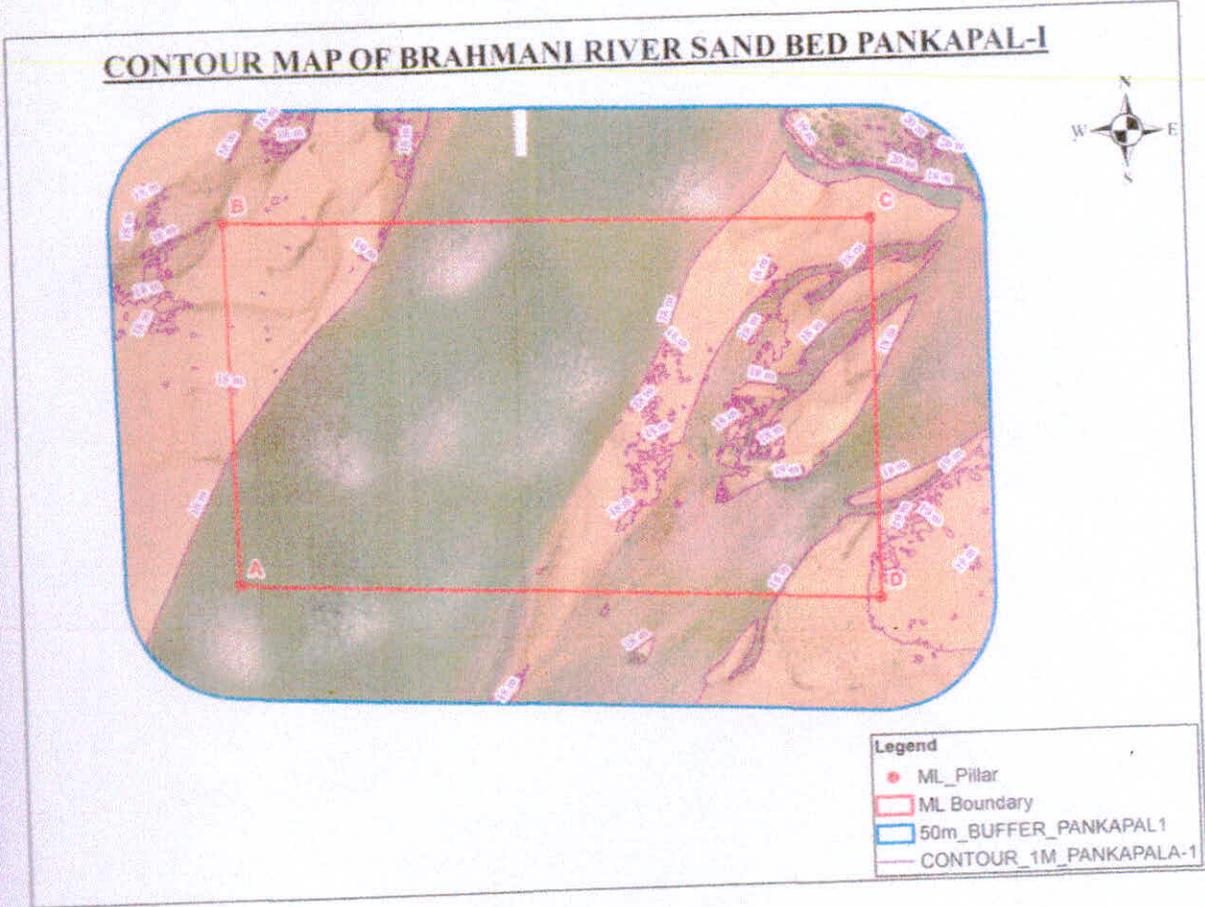
VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.



[Handwritten Signature]
 DEPUTY DIRECTOR OF MINES(IIC)
 JAJPUR CIRCLE, JAJPUR



VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.



DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-I.**

**6. BASIS OF CALCULATION OF EXTRACTED VOLUME OF SAND FROM BUFFER ZONE
OF PANKAPAL I. SAND BED.**

Method of calculation

- i. To calculate the amount of sand excavated from the Buffer Zone of Pankapal-I Sand Bed, a 50 m buffer was considered from the mining lease boundary as per the Standard Operating Procedure (SOP) issued by ORSAC for drone-based replenishment studies.
- ii. A detailed Drone and DGPS survey was carried out on the specified date, and the processed ortho map was used to visually examine the presence of any excavation Outside the ML boundary.
- iii. Upon detailed spatial analysis of the ortho map and digital elevation data, no significant signs of sand excavation were detected within the 50-meter buffer zone outside the ML boundary of Pankapal-I Sand Bed.
- iv. Hence, no excavated patches were demarcated.

7. Conclusion

The survey conducted on dated 02.04.2025 and the analysis reveals that no sand excavation has been observed within the 50-meter buffer zone outside the mining lease area of the Pankapal-I Sand Bed. As a result, no sand extraction volume has been estimated in the buffer zone of Pankapal-I Sand Bed.


DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

S. Mohanty



GOVERNMENT OF ODISHA
OFFICE OF THE DEPUTY DIRECTOR OF MINES
JAJPUR CIRCLE, JAJPUR

E- mail: ddmjajpur.mm@gov.in

Letter No. 5142 /MM, Jajpur/ Date 20-12-2024

To

M/s. T.K.S Consultancy Services,
 Plot No.4482/12068, Pandara, GGP Colony,
 Rasulgarh, Bhubaneswar.

Sub: Postpone of the date scheduled for Joint Assessment of unauthorisedly excavated sand from the area of buffer zone of Brahmani River Sand Bed-Pankapal-I & Brahmani River Sand Bed-Pankapal-II.

Sir,

With reference to the subject cited above, this is to inform you that, the joint assessment scheduled to be held on 21.12.2024 at 11 A.M for unauthorisedly excavated sand from the area of buffer zone of Brahmani River Sand Bed-Pankapal-I & Brahmani River Sand Bed-Pankapal-II under Danagadi Tahasil of Jajpur District is hereby postponed to 26.12.2024 due to adverse weather condition.

This is for your information.

Yours faithfully,

Mining Officer (I/C), Jajpur

Memo No. 5143 /MM, Jajpur, Dated. 20-12-2024

Copy to Sri Dilip Kumar Sahoo, Lessee- Brahmani River Sand Bed-Pankapal-I & Daitari Dhal-Lessee, Brahmani River Sand Bed-Pankapal-II for information. They are requested to remain present in person at the time of joint assessment without fail.

Mining Officer (I/C), Jajpur

Memo No. 5144 /MM, Jajpur, Dated. 20-12-2024

Copy submitted to the Deputy Director of Mines, Jajpur Circle, Jajpur for favour of kind information.

Mining Officer (I/C), Jajpur

Memo No. 5145 /MM, Jajpur, Dated. 20-12-2024

Copy to the Tahasildar, Danagadi for information. He is requested to remain present in person or depute any of his authorised officers/staffs for joint assessment on the date and time as stipulated above.

Mining Officer (I/C), Jajpur

DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

- ✕ -

Memo No. 5146 /MM, Jajpur, Dated. 20-12-2024 /
Copy submitted to the Chief Executive, ORSAC, Bhubaneswar for favour of kind information and necessary action.

[Handwritten signature]
20/12/24

Memo No. 5147 /MM, Jajpur, Dated. 20-12-2024 /
Copy submitted to the Director of Minor Minerals, Odisha, Bhubaneswar for favour of kind information.

Mining Officer (I/C), Jajpur

[Handwritten signature]
20/12/24

Mining Officer (I/C), Jajpur

[Handwritten signature]

DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY
EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI
RIVER SAND BED PANKAPAL-II**

UNDER DANAGADI TAHASIL OF JAJPUR DISTRICT, ODISHA

Work Order No. 5142/MM, JAJPUR, Dt. 20/12/2024

(Date of Drone Survey: 02.04.2025)

(Use of UAV/Drone, DGPS Survey Techniques adopted)

Prepared By:



M/S TKS CONSULTANCY SERVICES

**Plot No-3153/14698, Pandara, Unit - II-38,
Near Second Wife Kitchen, Rasulgarh,
Bhubaneswar, Khordha, Odisha-751010
E-mail: tkscsbbs@gmail.com
Contact: +91 8249834881**

**An ISO 9001:2015 Certified Consultancy
AN ORSAC EMPANELLED AGENCY**

**DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR**

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LIST OF ANNEXURES

DESCRIPTION	<u>ANNEXURE NO.</u>
Copy of Letter from Mining Officer, Jajpur to M/s. TKS Consultancy Services for Volume Assessment Report.	I


 DEPUTY DIRECTOR OF MINES(I/C)
 JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.**

1. Introduction:

The Mining Officer, Jajpur District, issued a letter to M/s. TKS Consultancy Services vide Letter No. 5142/MM,Jajpur, dated 20.12.2024, for Volume assessment of Unauthorisedly excavated sand from the buffer zone of Brahmani River Sand Bed Pankapal-II. The lease area was surveyed using Drone and DGPS to carry out a detailed volume assessment. For calculating the volume of sand excavated, a 50-meter buffer zone from the mining lease boundary of Pankapal-II Sand Bed was considered as per the Standard Operating Procedure (SOP) issued by ORSAC for drone-based replenishment studies.

2. Location of the Area:

The Lease area is located at latitude between 20° 53' 10.540" N to 20° 53' 18.870" N and longitude 86° 1' 0.360" E to 86° 1' 10.660" E.

The details of Boundary pillar coordinates are given below the table.

PILLAR CO-ORDINATES		
PI_ID	LONGITUDE	LATITUDE
A	86° 1' 2.100" E	20° 53' 10.540" N
B	86° 1' 0.360" E	20° 53' 16.430" N
C	86° 1' 8.880" E	20° 53' 18.870" N
D	86° 1' 10.660" E	20° 53' 12.940" N

3. Land Schedule:

The lease area is lies in the village Pankapal, under Danagadi Tahasil of Jajpur district, Odisha. Bearing Khata No. 224, Plot No.-1075

DGPS SURVEY SOURCE AREA

Name of the Quarry	Mouza	Khata No.	Plot No.	Area in (Acres)	Kisam
Pankapal-II Sand Quarry	Pankapal	224	1075	12.30	NADI
Total Area				12.30	


DEPUTY DIRECTOR OF MINES(I/C)
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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.**

4. Equipment for Survey and Data Processing

(i) DRONE SPECIFICATION

Item (Model)	Manufacture	
Drone	CBAI	
Payload	RGB Camera (20 Megapixel)	
Flying Height	100 meters	
Speed	10m/s	
Front overlap	70%	
Side Overlap	75%	

TABLE-1: -LIST OF HARDWARE EQUIPMENT'S

(ii) DGPS Description

Sl. No	Particulars	Description	Product Image
1	DGPSdevice	TrimbleR12integratedGNSSSystem	
2	No.ofChannels	672	
3	Antenna	Integrated	
4	Frequencyused	GPS L1&L2, GLONASS F1&F2 Asia-Pacific version: GPSL1&L2, BEIDOU B1&B2	
5	Horizontal accuracy	8mm RTK	
6	Vertical accuracy	15mmRTK	
7	Controller	TrimbleTSC7 Controller	

TABLE-2: - LIST OF HARDWARE EQUIPMENT'S

(iii) Software

Software Used	Serial No/Version	Purpose of Use
Trimble Business Center	5.0	DGPS Data processing
Pix4D mapper	4.8.4	Drone Data processing
Auto Cad Map	2024	Preparation of Section
Global Mapper	2023	Preparation of Surface & Contour
Microsoft office	2023	Report Preparation

TABLE-3: - LIST OF SOFTWARE USED



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VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.

5. Data & Methodology:

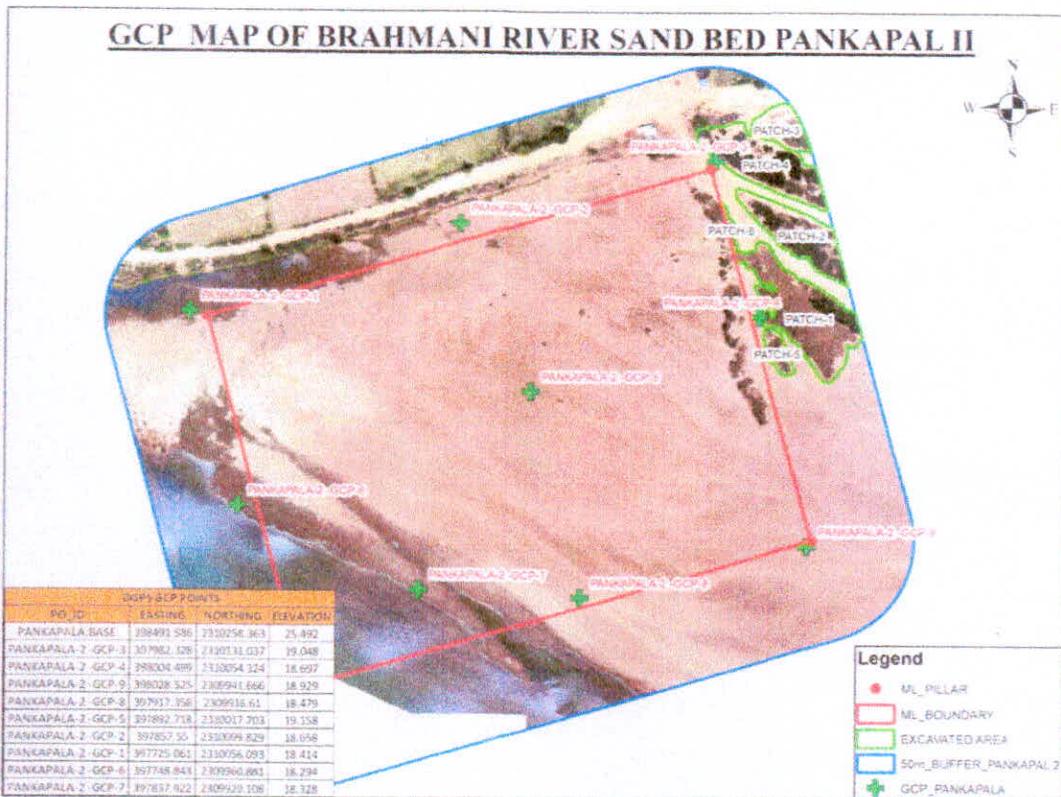
The Mining Officers issue work orders for the assessment of reserves and replenishment studies within their respective jurisdictions, along with relevant lease information. Upon receiving the work order, the consultancy verifies and validates the lease information to ensure accuracy. Any data gaps identified during this process are discussed and resolved in coordination with the concerned Mining Officers. The following methodology has been adopted for the study:

i. DGPS Survey

To ensure accuracy and reliability in DGPS-based surveys, the primary control point coordinates are provided by ORSAC.

a) Ground Control Point:

Ground Control Points (GCPs) were established to ensure precise horizontal and vertical positioning for accurate geospatial mapping. These GCPs were strategically placed and linked to a reference network to enhance the accuracy of drone imagery processing; the list of GCPs is given below:



[Handwritten Signature]

**DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR**

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.**

GCP COORDINATES			
PO_ID	EASTING	NORTHING	ELEVATION
PANKAPALA.BASE	398491.586	2310258.363	25.492
PANKAPALA-2 -GCP-3	397982.328	2310131.037	19.048
PANKAPALA-2 -GCP-4	398004.499	2310054.324	18.697
PANKAPALA-2 -GCP-9	398028.525	2309941.666	18.929
PANKAPALA-2 -GCP-8	397917.358	2309916.61	18.479
PANKAPALA-2 -GCP-5	397892.718	2310017.703	19.158
PANKAPALA-2 -GCP-2	397857.55	2310099.829	18.658
PANKAPALA-2 -GCP-1	397725.061	2310056.093	18.414
PANKAPALA-2 -GCP-6	397748.843	2309960.881	18.294
PANKAPALA-2 -GCP-7	397837.922	2309920.108	18.328

Table 4: GCP used for Image Processing

b. Process of Drone Survey & Data Validation

Drone mapping, also known as aerial mapping or photogrammetry, is a method of creating accurate maps, models, and surveys using unmanned aerial vehicles (UAVs) equipped with cameras or sensors. The process involves several key steps:

- **Mission Planning:** After demarcation of GCP in the ground using RTK method, Determine the area to be mapped and drone flew over the lease area with 100 meters buffer for zone safe side. plan the flight mission, taking into account factors such as weather conditions, airspace restrictions, and flight parameters.
- i. **Equipment Setup:** Prepare the drone and its payload, ensuring the camera or sensor is properly calibrated and functioning correctly. Set up ground control points (GCPs) if high-precision mapping is required.
- ii. **Flight Execution:** The drone flies in a systematic pattern, capturing overlapping images with around 75% overlap both side and forward of the area of interest. The flight pattern can be predefined using automated flight planning software to ensure comprehensive coverage.
- iii. **Data transfer & Backup-** Download image and sensor data from the drone & back up data securely.
- iv. **Data Processing & Analysis-** Using PIX4D application data processed with referenced to the GCP and generated True ortho, DTM, DSM & Point Clouds
- v. Checked the quality of the data and submitted the Raw & Processed data in defied SOP to the nodal agency (ORSAC) for Vetting.
- vi. After successful vetting of the data ORSAC certifies accuracy of the data.

VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.

Output:

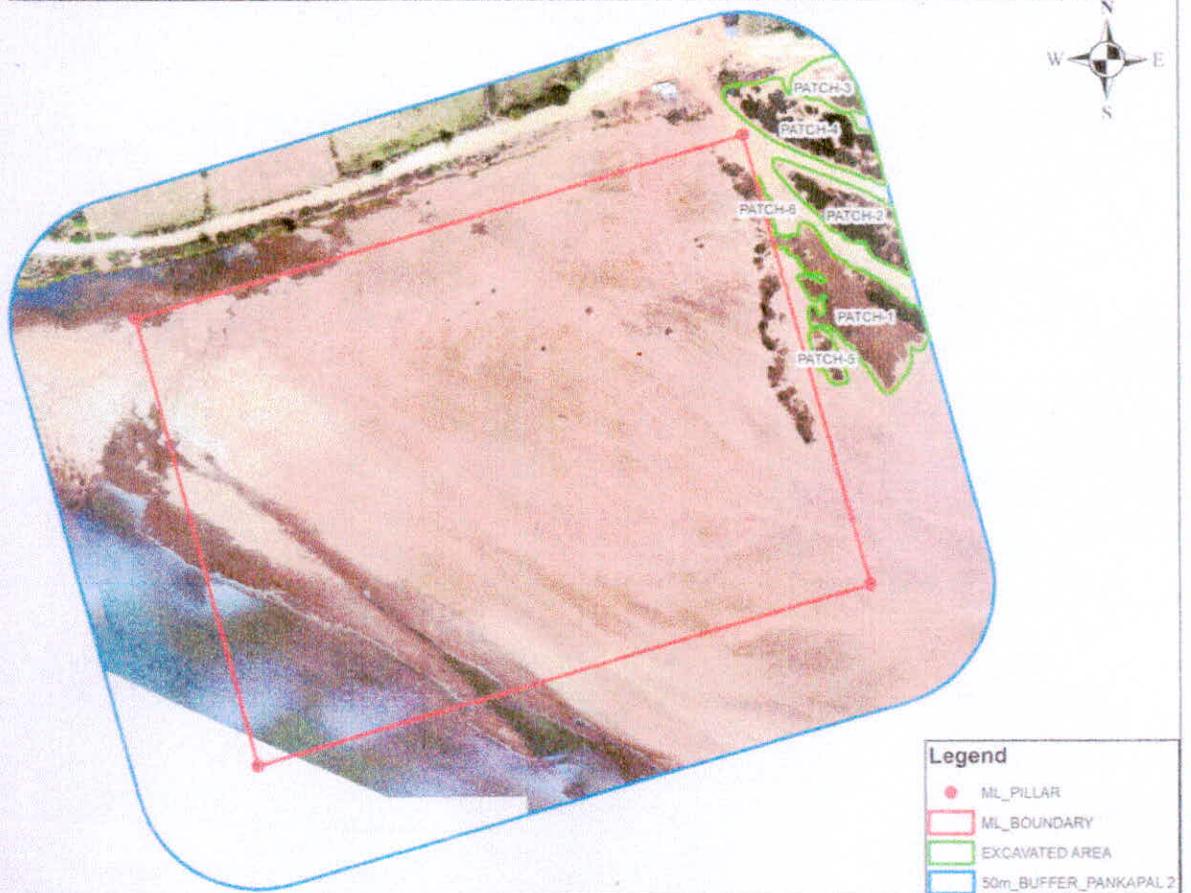
o **High-resolution ortho photo**

A geometrically corrected aerial image with consistent scale, providing accurate representation and enabling direct measurements. Used for land planning, environmental monitoring, and infrastructure management.

o **Accurate and Geo-referenced imagery**

Imagery aligned with geographic coordinates for integration into GIS systems. Ensures precise mapping and measurement, useful for land surveying, construction, and resource management.

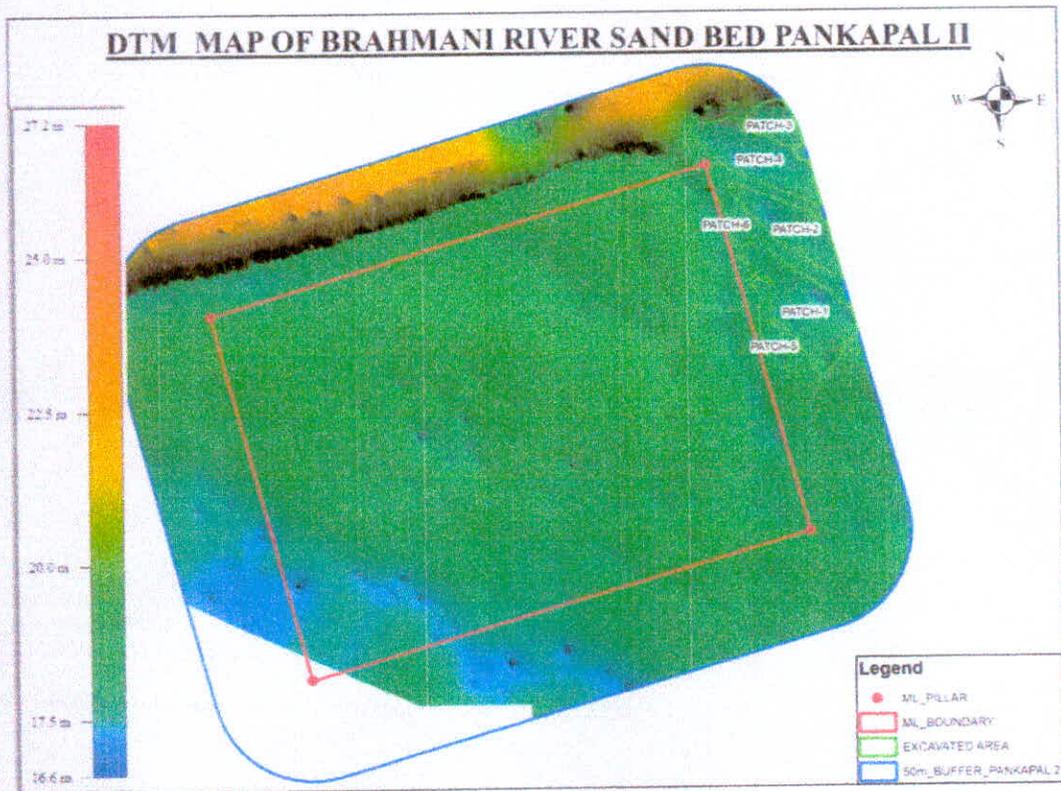
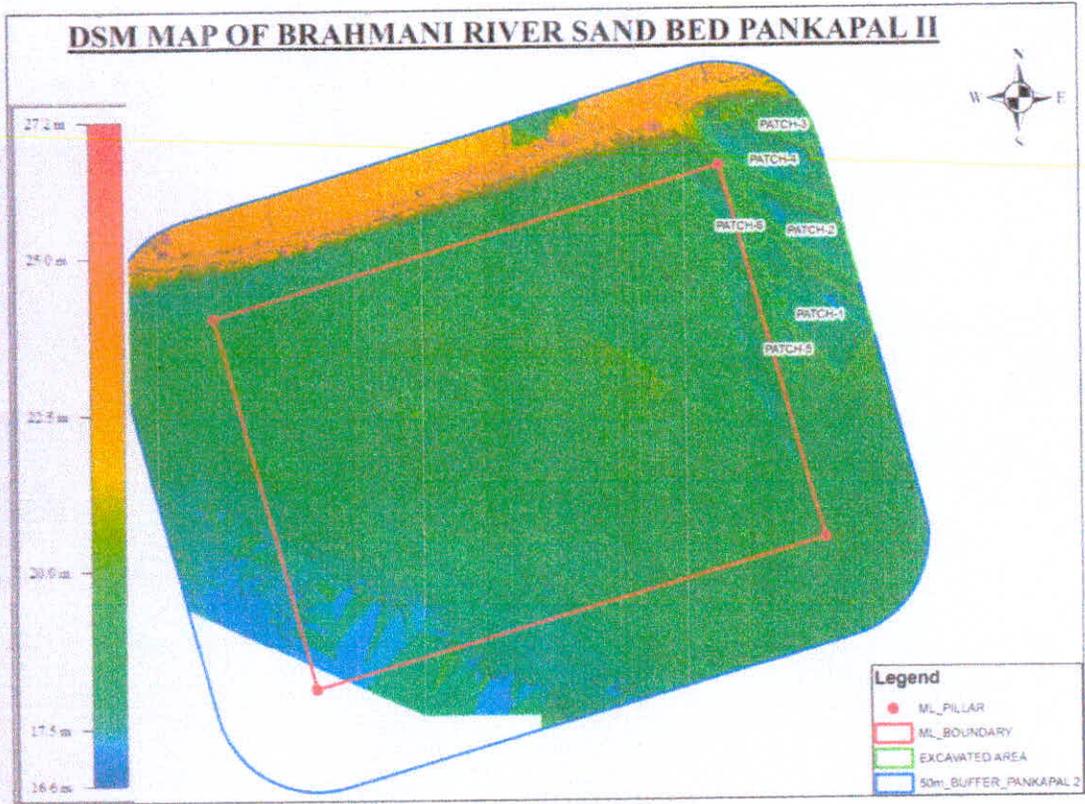
ORTHO MAP OF BRAHMANI RIVER SAND BED PANKAPAL II



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DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

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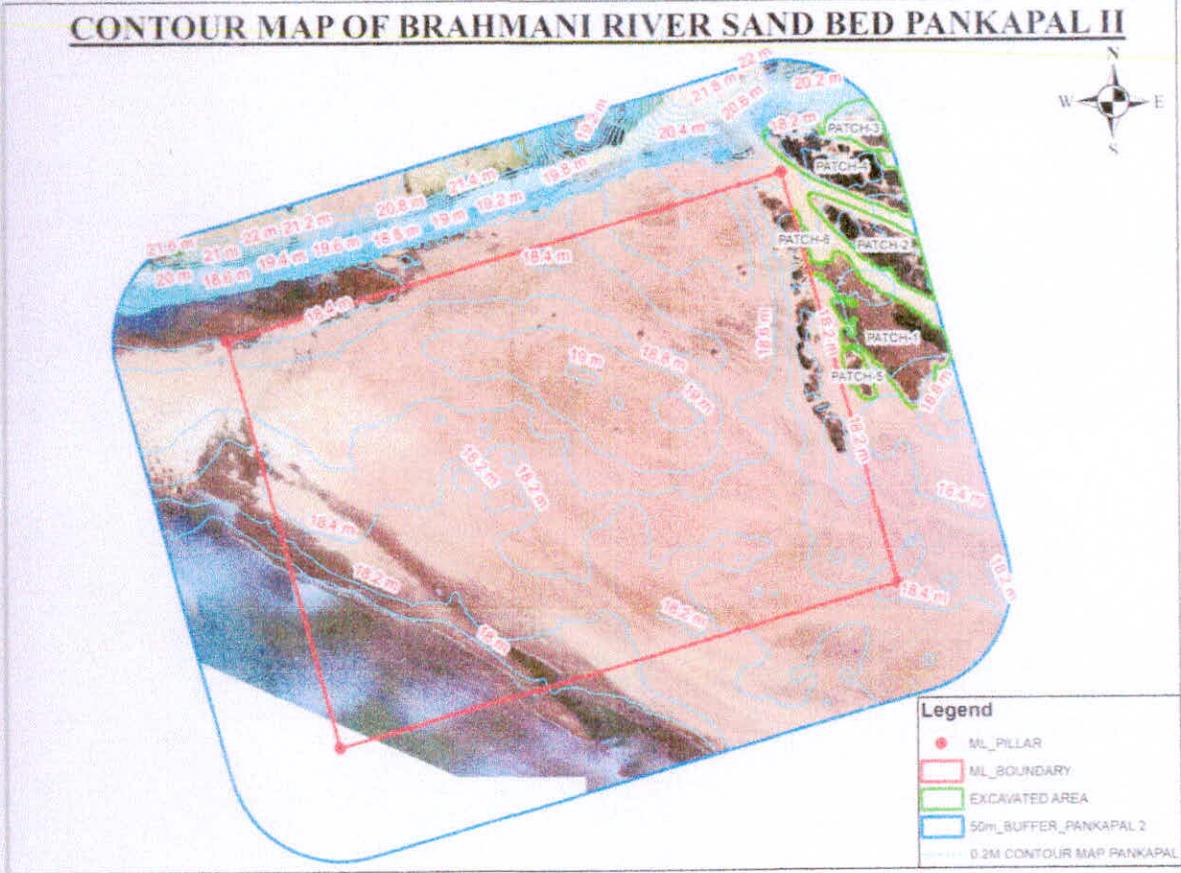
VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE




 DEPUTY DIRECTOR OF MINES (IC)
 JAJPUR CIRCLE, JAJPUR

VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.

CONTOUR MAP OF BRAHMANI RIVER SAND BED PANKAPAL II



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DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR

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**VOLUME ASSESSMENT REPORT OF UNAUTHORISEDLY EXCAVATED SAND FROM THE
BUFFER ZONE OF BRAHMANI RIVER SAND BED PANKAPAL-II.**

**6. BASIS OF CALCULATION OF EXTRACTED VOLUME OF SAND FROM BUFFER ZONE
OF PANKAPAL II SAND BED.**

Method of calculation

- i. To calculate the amount of sand excavated from the Buffer Zone of Pankapal-II Sand Bed, a 50 m buffer was considered from the mining lease boundary as per the Standard Operating Procedure (SOP) issued by ORSAC for drone-based replenishment studies.
- ii. The excavated area within this zone was divided into patches, and an average thickness of 0.5 meters was considered for the calculation of excavated volume.
- iii. The total extracted volume of sand from the buffer zone of Pankapal-II Sand Bed, outside the leasehold area, was calculated using the surface area method.
- iv. The excavated surface area was multiplied by the average thickness of the sand to determine the total volume of sand excavated in cubic meters (Cu.m).

EXCAVATED VOLUME			
NAME	AREA	THICKNESS	TOTAL VOLUME IN CUM
PATCH-1	1721.71	0.5	860.85
PATCH-2	914.34	0.5	457.17
PATCH-3	170.47	0.5	85.23
PATCH-4	1126.41	0.5	563.21
PATCH-5	181.48	0.5	90.74
PATCH-6	63.69	0.5	31.84
TOTAL			2089.04

7. Conclusion

The survey conducted on dated 02.04.2025 and the analysis reveals that total 2089.04 cum of sand has been excavated from the buffer zone of Brahmani River Sand at Pankapal- II Sand Bed.

DEPUTY DIRECTOR OF MINES(IC)
JAJPUR CIRCLE, JAJPUR



GOVERNMENT OF ODISHA
OFFICE OF THE DEPUTY DIRECTOR OF MINES
JAJPUR CIRCLE, JAJPUR
 E- mail: ddmjajpur.mm@gov.in

Letter No. 5142 /MM, Jajpur/ Date 20-12-2024

To

M/s. T.K.S Consultancy Services,
 Plot No.4482/12068, Pandara, GGP Colony,
 Rasulgarh, Bhubaneswar.

Sub: Postpone of the date scheduled for Joint Assessment of unauthorisedly excavated sand from the area of buffer zone of Brahmani River Sand Bed-Pankapal-I & Brahmani River Sand Bed-Pankapal-II.

Sir,

With reference to the subject cited above, this is to inform you that, the joint assessment scheduled to be held on 21.12.2024 at 11 A.M for unauthorisedly excavated sand from the area of buffer zone of Brahmani River Sand Bed-Pankapal-I & Brahmani River Sand Bed-Pankapal-II under Danagadi Tahasil of Jajpur District is hereby postponed to 26.12.2024 due to adverse weather condition.

This is for your information.

Yours faithfully,

Memo No. 5143 /MM, Jajpur, Dated. 20-12-2024
 Mining Officer (I/C), Jajpur

Copy to Sri Dilip Kumar Sahoo, Lessee- Brahmani River Sand Bed-Pankapal-I & Daitari Dhal-Lessee, Brahmani River Sand Bed-Pankapal-II for information. They are requested to remain present in person at the time of joint assessment without fail.

Memo No. 5144 /MM, Jajpur, Dated. 20-12-2024
 Mining Officer (I/C), Jajpur

Copy submitted to the Deputy Director of Mines, Jajpur Circle, Jajpur for favour of kind information.

Memo No. 5145 /MM, Jajpur, Dated. 20-12-2024
 Mining Officer (I/C), Jajpur

Copy to the Tahasildar, Danagadi for information. He is requested to remain present in person or depute any of his authorised officers/staffs for joint assessment on the date and time as stipulated above.

Mining Officer (I/C), Jajpur


DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

-2X-

Memo No. 5146 /MM, Jajpur, Dated. 20-12-2024
Copy submitted to the Chief Executive, ORSAC, Bhubaneswar for favour of kind information and necessary action.

[Signature]
20/12/24

Mining Officer (I/C), Jajpur

Memo No. 5147 /MM, Jajpur, Dated. 20-12-2024
Copy submitted to the Director of Minor Minerals, Odisha, Bhubaneswar for favour of kind information.

[Signature]
22/12/24

Mining Officer (I/C), Jajpur

[Signature]

DEPUTY DIRECTOR OF MINES(I/C)
JAJPUR CIRCLE, JAJPUR



ANNEXURE - R/5

641

GOVERNMENT OF ODISHA
OFFICE OF THE DEPUTY DIRECTOR OF MINES
JAJPUR CIRCLE, JAJPUR
E - mail: ddmjajpur.mm@gov.in

Letter No. 7379 /MM, Jajpur/ Date 05.12.2025

To

Sri Daitari Dhal,
Lessee- Brahmani River Sand Bed Pankapal-II
S/o-Chaturbhujia Dhal, At-Brajanagar, Po-Rudhia, Dist-Jajpur.

Sub: Show-Cause Notice for extraction of sand from the buffer zone of Brahmani River Sand Bed-Pankapal-II.

Sir,

The assessment conducted on 02.04.2025 w.r.t Brahmani River Sand Bed-Pankapal-II reveals that **2089.04 Cu m** of sand has been extracted from the buffer zone of the said quarry contravening the terms and condition of Environmental Clearance, Mining Plan and OMMC Rules, 2016 & Amendments thereof.

In view of the above violations, you are hereby directed to show cause within three days of receipt of this notice as to why an amount of **Rs.10,87,545/-** as calculated below against the extracted quantity shall not be imposed on you.

Sl No.	Dues imposed	Amount to be deposited	Account No./Head of Account
01	Royalty @ 35/- per Cu m	Rs.73,117/-	0853-00-107-0217-02266-954 Minor minerals-Stone-Collection of Royalty
02	Addl. Charge @ 234/- per Cu m	Rs.4,88,836/-	
03	DMF 30% of royalty	Rs.21,936/-	Ac. No.35618440771, SBI, IFSC CODE-0012064, Beneficiary Name-Collector, Jajpur
04	EMF 5% of royalty	Rs.3,656/-	Ac. No.06640100956287, IFSC Code-UCBA0000664, UCO Bank, Branch-Govt. Secretariate, Customer Name-Odisha Env Management Trust (OMEF)
05	Penalty	Rs.5,00,000/-	0853-00-800-0097-02082-000-Misc receipt under mining
Total =		Rs.1087545/-	

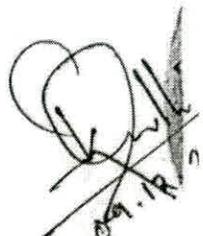
Memo No. 7380 /MM, Jajpur/ Date 05.12.2025
Mining Officer (I/C), Jajpur.

Copy submitted to the Deputy Director of Mines-cum-Controlling Authority, Jajpur Circle, Jajpur for favour of kind information.

Mining Officer (I/C), Jajpur.

DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR

*1-


JMD
for n/

To

The Mining Officer

Jajpur

Subject: Reply to Show Cause Notice for Extraction of Sand from Buffer Zone — Bramhani River Sand Bed, Pankapal-2

Reference: Letter No. 7379 dated 05.12.2025

Respected Sir,

With due respect, this is to submit my reply regarding the show cause notice issued in connection with the alleged extraction of sand from the buffer zone of the Bramhani River sand bed, Pankapal-2.

I would like to clarify that the said extraction activity has not been carried out by me. The letter under reference was issued on assessment conducted on 02 April 2025, while my agreement with the competent authority for sand quarry operation was executed on 19 March 2025, and the actual work commenced only on 13 April 2025, after completion of all formalities and receipt of necessary permissions and completion of road work.

Hence, the alleged extraction, if any, before 13 April 2025, does not pertain to my period of operation and has not been executed under my supervision or responsibility.

In view of the above facts, I request your good office to drop the proceedings against me in this matter.

Thanking you.

Yours faithfully,



Daitari Dhal

Lessee, Bramhani River Sand Bed (Pankapal-2)

Date: 06.12.2025

4838
09.12.2025


**DEPUTY DIRECTOR OF MINES (IG)
JAJPUR CIRCLE, JAJPUR**



GOVERNMENT OF ODISHA
OFFICE OF THE DEPUTY DIRECTOR OF MINES
JAJPUR CIRCLE, JAJPUR
E - mail: ddmjajpur.mm@od.gov.in

Letter No. 7518 /MM, Jajpur/ Date 12.12.2025

From

Mining Officer-cum-
Competent Authority, Jajpur District.

To

Sri Daitari Dhal,
Lessee- Brahmani River Sand Bed Pankapal-II
S/o-Chaturbhuj Dhal,
At-Brajanagar, Po-Rudhia, Dist-Jajpur.

Sub: Intimation for hearing.

Ref: (1) This office Show-Cause Notice No.7379, dated 05.12.2025.
(2) Your reply dated 06.12.2025 received on 09.12.2025.

Sir,

With reference to the subject cited above, I am to say that, the reply submitted by you w.r.t this office Show-Cause Notice No.7379, dated 05.12.2025 regarding unauthorised extraction of 2089.04 Cu m of sand from the buffer zone of Pankapala-II sand quarry is not satisfactory. However, considering the principle of natural justice, you are hereby intimated for a hearing scheduled on 23.12.2025 at 04 P.M on the above matter.

Hence, you are requested to remain present on the scheduled date and time positively along with written submission and supportive documents on your stand.

Yours faithfully,

Mining Officer (I/C), Jajpur

Memo No. 7519, M.M, Jajpur, Date. 12.12.2025

Copy submitted to the Deputy Director of Mines, Jajpur Circle, Jajpur for favour of kind information.

Mining Officer (I/C), Jajpur

DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR



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ANNEXURE - U/5 644

GOVERNMENT OF ODISHA
OFFICE OF THE DEPUTY DIRECTOR OF MINES
JAJPUR CIRCLE, JAJPUR
E - mail: ddmjajpur.mm@od.gov.in

Letter No. 7381 /MM, Jajpur/ Date 05.12.2025

From

Mining Officer,
Jajpur District.

To

M/s. Areal Constructions & Geo-India Services,
Bhubaneswar.

Sub: To submit the Assessment Report w.r.t Brahmani River Sand Quarry Pankapal-I & Pankapal-II under Tahasil Danagadi vetted from ORSAC.

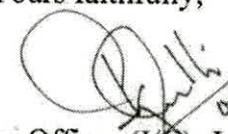
Ref: This office Letter No.3027, dated 19.05.2025.

Sir,

With reference to the subject cited above, you are requested to submit the Assessment Report w.r.t Brahmani River Sand Quarry Pankapal-I & Pankapal-II under Tahasil Danagadi vetted from ORSAC at the earliest.

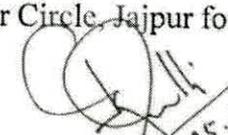
This may be treated as **Most Urgent**.

Yours faithfully,


Mining Officer (I/C), Jajpur

Memo No. 7382, M.M, Jajpur, Date, 05.12.2025

Copy submitted to the Deputy Director of Mines, Jajpur Circle, Jajpur for favour of kind information.


Mining Officer (I/C), Jajpur


DEPUTY DIRECTOR OF MINES (I/C)
JAJPUR CIRCLE, JAJPUR



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Reply all

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