

**FORM-V**

**ENVIRONMENTAL STATEMENT**

**Environment statement for the financial year ending 31<sup>st</sup> March 2025**

**Part – A**

- i) Name & Address of the owner/ occupier of the industry operation or process (Name of the Project Officer/ Sub-Area Manager & Office address to be given) : Shri Ashok Kumar Ojha, Project Officer, Siarmal OCP, Mahalaxmi Area, PO: Basundhara, Dist.: Sundargarh (Odisha), Pin: 770076.
- ii) Industry Category : Primary (Coal Mining Operation).
- iii) Production Capacity (Coal production during the year 2024-25) : 20.0 MT (18526641.39 tons).
- iv) Year of establishment : 02.01.2023.
- v) Date of the last Environmental Statement submitted. : 30.09.2024

**Part – B**

**Water & Raw Material Consumption**

Note: Average Water Consumption (Cum/ day) for the whole year is given. Raw material consumption is given per unit of coal produced.

**(I) Water Consumption (Cum/ day):**

Serial No.	Industrial/ Mining	Consumption in Cum/ day
1. a	Haul Road Dust Suppression	5691
b	Dust Suppression at CHP	N.A.
c	Dust Suppression at Siding	N.A.
d	Fire Fighting	64
e	Workshop	10
f	Others	5
2.	Domestic	18
	<b>Total in kℓ/ day</b>	<b>5788.00</b>

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2023-24	2024-25
Coal	130	114.03

**(II) Raw Material Consumption (per ton of coal):**

Name of Raw Material	Consumption of Raw Material (per ton of Coal produced)	
	2023-2024	2024-2025
H.S. Diesel (ℓ/ t)	1.430	1.189
Petrol (ℓ/ t)	0.000	Nil
Lubricants (ℓ/ t)	0.010	0.012
Electricity (Units/ t)	0.550	0.086
Explosives (kg/ t)	0.289	0.312

**Part – C**

**Pollution Discharged to Environment/ Unit of Output**

(Parameter as specified in the 'Consent' issued)

Pollutants	Quantity of pollutants discharged (mass/ day)	Concentrations of pollutants in discharges (mass/ volume)			Percentage variation from prescribed standards with reasons
<b>Monitoring Station: Mines Pit Water - 1 (Annual Average)</b>					
		<b>Mine Effluent</b>	<b>OGT Outlet</b>	<b>STP Outlet</b>	
TSS (mg/ℓ)	Not possible to quantify	19.9	-	-	Values within prescribed limits.
BOD mg/ℓ)		4.0	-	-	
COD (mg/ℓ)		18.0	-	-	
pH		6.3	-	-	
O & G (mg/ℓ)		1.9	-	-	
<b>Ambient air quality of one station (Annual Average): South of Working Face Haldibahal Village (Annual Average)</b>					
SPM (μg/m <sup>3</sup> )	Not possible to quantify	188.85			Values within prescribed limits.
PM <sub>10</sub> (μg/m <sup>3</sup> )		70.86			
SO <sub>2</sub> (μg/m <sup>3</sup> )		8.25			

NO <sub>x</sub> (µg/m <sup>3</sup> )		12.27	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )		31.17	

**Part – D**

**Hazardous Wastes**

**As specified under Hazardous Wastes (Management & Handling) Rules, 1989.**

Hazardous Waste	Total Quantity (kg)	
	During the previous financial year (2023-24)	During the current financial year (2024-25)
<b>(a) From process: (From Maintenance of Mining Equipment)</b>		
i. Burnt Oil in Workshops	37.02 kl	142.67 kl
ii. Oil-soaked filters	Nil	0.3 ton
<b>(b) From pollution control facilities: (During Maintenance)</b>		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	Nil	Nil
ii. Oily sludge	Not present	Not present
iii. Chemical Waste (if any)	Not present	Not present

**Part – E**

**Solid Wastes (other than hazardous)**

Particulars	Total Quantity	
	During the previous financial year (2023-24)	During the current financial year (2024-25)
<b>(a)</b> From process (Topsoil and Over burden)	Overburden: 8.912 M. cum. Top Soil: 0.226 M. cum.	Overburden: 18.019 M. cum. Top Soil: 0:303 M. cum.
<b>(b)</b> From pollution control facilities (STP & Sed-Pond Sludge)	N.A.	N. A.
<b>(c) 1-</b> Quantity recycled or re-utilized (OB back-filled)	Top Soil: Nil Top Soil Dump has been created and the grassing is being done, it will be utilized for plantation purpose.	Top Soil: Nil Top Soil Dump has been created and the grassing is being done, it will be utilized for plantation purpose.

2- Sold	Nil	Nil
3- Disposed	8.912 million cubic meters has been dumped into the void of Basundhara West OCP.	18.019 million cubic meters has been dumped into the void of Basundhara West OCP.

**Part – F**

**Please specify the characteristics (in terms of concentration & quantum) of hazardous as well as solid waste and indicate the disposal practice adopted for both these categories of wastes.**

**(I) Hazardous Wastes:**

<b>Name of Hazardous Wastes</b>	<b>Quantity generated in the year 2024-25</b>	<b>Disposal Practices</b>
Burnt Oil, etc. (kl) (from W/Shop)	142.67	Storage in containers over impervious floor under well-ventilated covered shed followed by disposal through actual users authorized by OSPCB.
Oil-soaked filters (tons) (from W/Shop)	3.3	Storage in containers over impervious floor under covered shed followed by Co-processing in cement kilns authorized by OSPCB, disposal in authorized CHWTSDF.
Waste / Residue Containing Oil	Nil	Storage in containers over impervious floor under covered shed followed by Co-processing in cement kilns authorized by OSPCB, disposal in authorized CHWTSDF.
Oil & Grease (kg) (from ETP/OGT)	Nil	N.A.
Oily Sludge (te.) (From ETP/OGT)	Not present	N.A.
Oil emulsion	Not present	N.A.
Chemical Waste if any (kg)	Not present	N.A.
Battery (nos.)	112	Used Batteries sold to registered

		vendor. Vendor: Rajiv Metals Barwala Road, Hansi, Hisar, Hariyana.
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**Note:** A detailed note on disposal practices of the above should be given separately.

**(II) Solid Wastes:**

Solid Waste	Quantity generated in the year 2024-2025	Disposal Practices
Topsoil (M. cum.)	0.303 M. cum.	To be used in plantation area. However, Top Soil Dump has been created and the grassing is being done.
OB (M. cum.)	18.02 M. cum.	OB has been dumped in to the void of Basundhara West OCP.
STP & Sed-Pond Sludge	-	-

**Land Reclamation & OB disposal – progressive till 31<sup>st</sup> March 2025:**

Particulars	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	Not present	N.A.
2) Excavated land	157.81	22.380 MM <sup>3</sup>
3) Land affected (1+2)	-	-
4) Backfilled (out of 2)	Nil	Nil
5) Land physically reclaimed (out of 3)	Nil	Nil
6) Land biologically reclaimed (out of 3)	Nil	Nil

**Part – G**

**Impact of pollution control measures on conservation of natural resources and consequently on cost of production.**

In order to carry out mining in an eco-friendly manner, a detailed Environmental Management Plan (EMP) was prepared by Regional Institute-VII of CMPDIL. The main pollution control measures suggested in EMP along with the measures implemented so far have been summarized in Table-1.1 to 1.3.

**Table – 1.1**  
**Air Pollution Control Measures**

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Water sprinkling and grading of all roads to minimize air-borne dust from vehicles.	Provided	<ol style="list-style-type: none"> <li>1. 12 numbers of trolley mounted fog canons have already been procured and installed around the coal stock yard.</li> <li>2. Installation of 168 fixed type sprinklers has already been started at the main haulage road with permanent water sprinklers. Till then, 5 nos. of 28 kl water tankers and 9 nos. of 16 kl water tankers are plying on the main haulage road in the mine to abate fugitive dust emission.</li> <li>3. CHP has not yet been constructed. CHP will come into operation in the fifth year of coal production.</li> </ol>
2	Effective control measures shall be carried out in critical areas prone to Fugitive dust emission from all sources shall be controlled regularly.	Provided	<p>12 numbers of trolley mounted fog canons have already been procured and installed around the coal stock yard.</p> <p>5 nos. of 28 kl water tankers and 9 nos. of 16 kl water tankers have been deployed at the mines to abate fugitive dust emission.</p> <p>NABL Accredited Agency, i.e. M/s Environmental Research and Services (India) Pvt. Ltd. Bhubaneswar, has been selected as the agency to conduct the air, water &amp; noise monitoring periodically.</p>

3	Biological reclamation of land.	Not yet started	Backfilled area not available for biological reclamation up to the desired RL.
4	Green belt around mine & infrastructures.	Provided	Approx. 3100 nos. of saplings have been planted within the mine area.
5	Drills fitted with dust control devices.	Provided	Water Injection system is provided for wet drilling.
6	Dust suppression / dust extraction system to be provided in CHP.	Not applicable	-
7	Improved maintenance of plant & machinery.	Provided	Efforts have been made to reduce the consumption of lubricant oil used in Heavy Mining Equipment's by timely maintenance, arresting leakages and eliminating spillages.
8	Mechanized coal transportation system.	Provided	-

**Table – 1.2**

**Water Pollution Control Measures**

Sl. No.	EMP Provisions/ Additional precautions	Whether provided or not	Remarks
1	Mine water is to be collected in central sump on dip side of pit. This will act as sedimentation lagoon.	Provided	A sump has been provided to collect the runoff water.
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provided	Run-off around reclamation area is being controlled by providing catch drains and a sedimentation point of 24000 cum has been created.
3	Surface run-off from external dump would be collected through a series of contour drains which would be connected to a water retention pond. The clear water from this pond will be re-utilized.	N.A.	N.A.

4	Domestic waste water will be treated in screens, oxidation pond/aerated lagoon. Sanitary waste to be disposed of into septic tank & soak-pit.	-	Domestic waste water is being treated in STP and re-utilized in green belt development and dust suppression.
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	HEMM washing center having ETP and recirculation of treated water is in operation.
6	Zero discharge from mine shall be maintained.	Maintained	Measures are being taken.
7	Catch and /or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working and coal heaps to prevent run off of water.	Provided	4.3 km long garland drain have been constructed along the periphery of the excavation area so that the runoff can be properly channelized into 3 nos. of Settling Ponds of 20000 m <sup>3</sup> capacity. A Settling Pond of 24,000 m <sup>3</sup> has been constructed.  5 nos. of check dams are being constructed to check the flow of water and impart proper sedimentation to the runoff.
8	Catch and /or garland drains and siltation ponds shall be constructed around the OB dumps to prevent run off of water.	N.A.	N.A.
9	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated. Adequate STP needs to be provided.	Provided	STP of 100 KLD capacity has been constructed for treatment of domestic waste water.  ETP of 150 kl/hr. capacity has been constructed for treatment of waste water for vehicle washing.
10	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	To be provided	Primary and secondary containment arrangement for oil spillage has been provided at workshop.
11	Piezometers shall be installed for	Provided	2 nos. of piezometers and 2 nos. flow

measurement of under-ground water depth and its quality.	meter have been installed within the mine area to check the water level and quantity of withdrawal respectively.
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**Table – 1.3**  
**Land Reclamation**

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	<b>Topsoil Management:</b> Proper stripping, Storage, and Relocation of topsoil.	Provided	Top Soil Dump has been created and grassing is being done. It will be subsequently utilized for plantation purpose.
2	<b>Physical Reclamation of OB Dump:</b> Proper reshaping and regrading of top surface, providing drainage arrangements and topsoil spreading on external and internal dumps.	N.A.	N.A.
3	<b>Biological Reclamation:</b> Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	N.A.	N.A.

**IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION**

Cost of Environmental Management during 2024-2025 was **Rs. 9.59** per ton of coal.

**Part – H**

Additional measures/ investment proposal for environmental protection including abatement of pollution, prevention of pollution.

S. No	Proposed activity	Amount in Rs.
1	Settling pond	2500000.00
2	CAAQMS	5000000.00

3	Environmental monitoring	1699200.00
4	Rainwater harvesting system	1000000.00
5	Fixed types water sprinklers	4000000.00
6	Plantation	15668009.00
7	Fog Canon (Truck Mounted)	2000000.00
8	Wind barrier	17500000.00
<b>Total</b>		<b>49367209.00</b>

**Part – I**

Any other particulars for improving the quality of the environment.

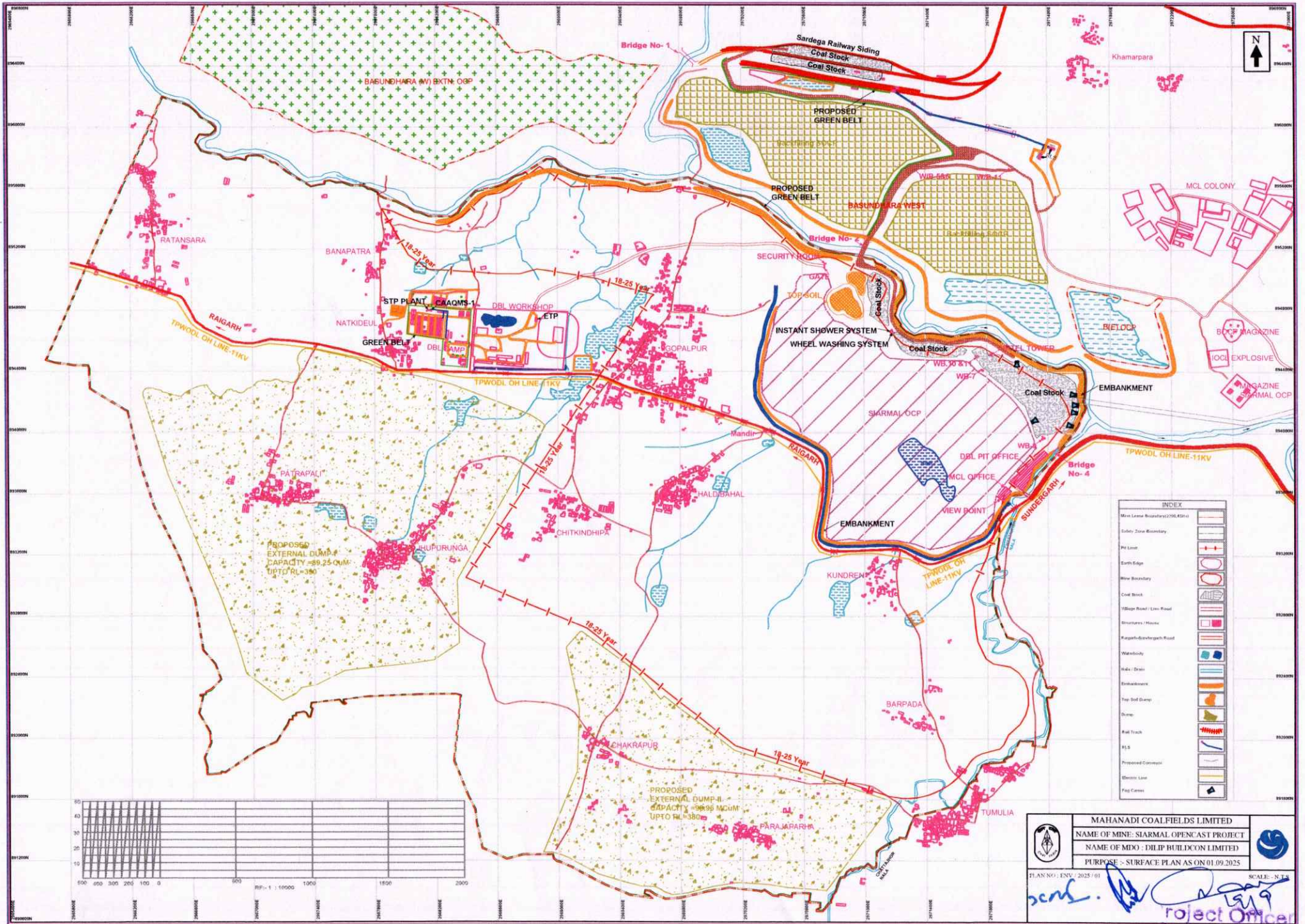
1. Celebration of World Environment Day for creating environmental awareness among employees and contract workman.
2. Celebration of Earth Day, Van Mahotsav, Ek Ped Maa Ke Nam etc. being carried out regularly for creating environmental awareness among employees, agencies, contract workmen etc.
3. Surface plan showing the relevant features like Present Working/ Quarry, Back-filling, Plantation, Instant shower, wheel washing, fog cannon. ETP, STP, Workshop, Hazardous waste storage shed etc. and Environmental Monitoring Stations: **Attached.**

**Note: Please attach a plan showing the relevant features like Present Working/ Quarry, External Dump, Back-filling, Plantation, Sedimentation Pond/ MDTP, Oil & Grease Trap/ ETP, Workshop, CHP, STP, etc. and Environmental Monitoring Stations: Attached.**

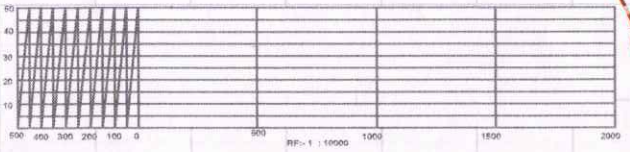
*Signature*  
19/9/25  
**Signature of the Project Officer**

(with seal)

**PROJECT OFFICER**  
**SIARMAL OCP**  
**MAHALAXMI AREA, MCL**  
*scarpark*



INDEX	
Mine Level Boundary (2750, 450)	[Symbol]
Safety Zone Boundary	[Symbol]
Pit Limit	[Symbol]
Earth Edge	[Symbol]
Mine Boundary	[Symbol]
Coal Stock	[Symbol]
Slope Road / Lim Road	[Symbol]
Structures / House	[Symbol]
Feeder-Banchergh Road	[Symbol]
Washboby	[Symbol]
Side / Drain	[Symbol]
Embankment	[Symbol]
Top Soil Dump	[Symbol]
Dump	[Symbol]
Rail Track	[Symbol]
P/S	[Symbol]
Proposed Corridor	[Symbol]
Electric Line	[Symbol]
Flag Corner	[Symbol]



	MAHANADI COAL FIELDS LIMITED		
	NAME OF MINE: SARMAL OPENCAST PROJECT		
	NAME OF MDO : DILIP BUILDCON LIMITED		
	PURPOSE : SURFACE PLAN AS ON 01.09.2025		
PLAN NO : ENV / 2025 / 01 <i>scm</i>		SCALE: N.T.S <i>Project Officer</i> Sarmal OCP	