



**File No: J-11011/281/2006-IA.II(I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**IA Division**  
**\*\*\***



Date **20/05/2025**



To,

M/s. JSW STEEL LTD.  
Pottaneri, Mecheri Salem Works, Salem, Tamil Nadu - 636453  
E-mail: [bns.prakashrao@jsw.in](mailto:bns.prakashrao@jsw.in)

**Ref: Proposal no. IA/TN/IND1/458028/2024 dated 12.08.2024.**

**Subject: Splitting of EC for the existing 0.8 MTPA Slag Grinding Unit of 1.3 MTPA Integrated Steel Plant between JSW Steel Limited Salem Works and JSW Cement Limited by M/s JSW Steel Limited Salem Works, located at JSW Steel Limited, Salem Works, Mettur, Dist- Salem, Tamil Nadu- Consideration of splitting of EC. - Reg.**

**Sir/Madam,**

This is in reference to your application for grant of splitting of Environmental Clearance (EC) under the provision of the EIA Notification 2006 and its amendment dated 21st April 2023- in respect of Installation of 0.8 MTPA Slag Grinding unit and new facilities related to value addition and technological upgradation within the existing 1.3 MTPA Integrated Steel Plant premises by M/s JSW Steel Limited located at village Pottaneri & M.Kalipatti, Mecheri, Taluk Mettur, District Salem, Tamil Nadu – Environmental Clearance under para 7(ii) of the EIA notification 2006 submitted to Ministry vide proposal number IA/TN/IND1/458028/2024 dated 12/08/2024.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A1001TN5425828S
(ii) File No.	J-11011/281/2006-IA.II(I)
(iii) Clearance Type	Splitting of EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	3(a) Metallurgical Industries (ferrous and non ferrous)
(vi) Sector	IND1
(vii) Name of Project	Installation of 0.8 MTPA Slag Grinding unit and new facilities related to value addition and technological upgradation within the existing 1.3 MTPA Integrated Steel Plant premises by M/s JSW

(viii) Name of Company/Organization  
(ix) Location of Project (District, State)  
(x) Issuing Authority

Steel Limited located at village Pottaneri & M.Kalipatti, Mecheri, Taluk Mettur, District Salem, Tamil Nadu – Environmental Clearance under para 7(ii) of the EIA notification 2006  
M/s. JSW STEEL LTD.  
Salem,TAMIL NADU  
MOEF&CC

3. The proposed project activity is listed at schedule no. 3(a) “Metallurgical industries (ferrous & non-ferrous)” under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

4. The instant proposal is considered in 73rd EAC Meeting held during 30th – 31st January, 2025, wherein after detailed deliberations, the committee recommended the proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions. The EAC proceedings of the said meeting can be seen using the following web link: at <https://parivesh.nic.in>.

5. The details of the proposal are as per the EIA/EMP report submitted by the proponent. The Unit configuration and capacity after splitting are given at **Annexure II**. Project Information, EC Responsibility and Environmental Liability Matrix are given at **Annexure III**. Action Plan for balance ESC expenditure by JSWSL is given at **Annexure IV**.

6. The EAC, in its 73rd EAC Meeting held during 30th – 31st January, 2025, inter-alia, deliberated the following:

i. The project of M/s. JSW Steel Works located in M. Kallipatti and Pottaneri Village, Mettur Tehsil, Salem District, Tamil Nadu was earlier granted environment clearance for the expansion of crude steel capacity from 1.0 to 1.3 MTPA and additional captive power plant of 1x30 MW vide letter No. J-11011/281/2006-IA. II (I) dated 07.07.2017. JSWSL obtained an EC amendment on 7th August, 2019, for specific condition (vii), allowing the transfer of CPP-II trade effluent to the steel plant for treatment, reuse, and ensuring Zero Liquid Discharge. The project was then granted Environment Clearance vide F. No. J-11011/281/2006-IA.II(I) dated 10.02.2020 for Installation of 0.8 MTPA slag grinding unit and new facilities related to value addition and technological upgradation within the existing 1.3 MTPA Integrated Steel Plant premises located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu under the provisions of para 7(ii) of the EIA Notification, 2006.

ii. The instant proposal is for seeking splitting of existing EC dated 10.02.2020 of JSWSL Salem Works between JSWSL Salem Works (Transferor Company) and JSW Cement Limited (Transferee Company), by transfer of 0.8 MTPA slag grinding unit (already in operation) to JSW Cement Limited located at JSW Steel Limited, Salem Works, Mettur, Dist.-Salem, Tamil Nadu as detailed in the relevant para above.

iii. The PP submitted that presently, JSWSL Salem Works is operating the 0.8 MTPA Slag Grinding Unit (SGU) for production of Ground Granulated Blast Furnace Slag (GGFBS) as a value addition facility to utilize the solid waste generated from BF operation. However, with increased generation of slag due to expansion of steel making facility, the SGU facility is intended to be hived off as a separate unit under the name of JSWCL. The PP reported that the transfer aligns with business objectives, operational expertise, and environmental benefits. The proposal ensures independent environmental management systems, separate EMP budgets, dedicated green cover commitments, and enhanced regulatory oversight for both entities. Additionally, the segregation will facilitate better compliance, improved pollution control, and more accurate monitoring of carbon emissions, ultimately supporting sustainable environmental management. The EAC found the justification for the proposed splitting of EC dated 10.02.2020 by transferring of 0.8 MTPA Slag Grinding Unit from JSWSL Salem Works to JSW Cement Limited satisfactory.

iv. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

v. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the

application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

vi. The EAC also took into consideration the drone survey of the project site and kml file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH and made following deliberations accordingly.

vii. The Committee also took into consideration the issues addressed by the project proponent based on the queries raised by EAC during the earlier consideration of the proposal and appraised the application accordingly.

viii. The EAC deliberation on the comparison of the key features between the previous EIA/ EMP Report presented during the appraisal of the EC dated 10.02.2020 and the Addendum EIA/EMP report in the current proposal to ensure there are no discrepancies and found the submission of PP satisfactory.

ix. The EAC deliberated on the Certified Compliance Report (CCR) issued by IRO, MoEF&CC dated 26.03.2024 and found it satisfactory.

x. The EAC noted that PP has submitted the requisite documents required for appraising the proposal for splitting of EC under the provisions of EIA Notification, 2006 and found that the proposal is in order.

xi. The EAC deliberated on the detailed addendum to EIA/EMP Report submitted by the PP including the salient features that will arise out of splitting arrangement such as project information matrix, raw material requirement, environment management plan, waste management, EC condition compliance matrix, environmental liability matrix etc. among both the entities along with the Environmental Appraisal Report submitted by the transferee JSWCL and found it satisfactory.

xii. The EAC deliberated on the comparative statement pertaining to pollution load assessment after the proposed change post splitting of EC and found it satisfactory.

xiii. The EAC noted that certain General Conditions of the existing EC dated 10th February, 2020, were not applicable to the current facilities of the 1.3 MTPA Steel Plant of JSW Steel Limited, Salem Works. It was advised that an EC amendment be sought before proceeding with the request to split the EC. While JSWSL applied for the amendment on 6th January, 2025, through the PARIVESH portal (Proposal No. IA/TN/IND1/517407/2025), the amendment is still under process. However, the splitting proposal was again brought before the EAC without obtaining the EC amendment letter. The PP stated that they would seek the amendment post-splitting, but the EAC opined that the PP should withdraw the current amendment application and submit a fresh one post-splitting to ensure all necessary aspects, including the new EC post splitted, are incorporated. **The PP was advised to obtain the amendment at the earliest.**

xiv. The EAC deliberated on the EC condition responsibility Matrix of JSWSL and JSWCL with respect to the EC conditions after splitting of existing EC and an undertaking submitted by M/s. JSWSL to comply with all the conditions stipulated in EC dated 10.02.2020, being a principal lessor and found it satisfactory.

xv. The EAC deliberated on the revised air quality modelling conducted for three scenarios: the combined 1.3 MTPA ISP and 0.8 MTPA SGU (as per the existing EC), the 1.3 MTPA ISP post-transfer of the SGU, and the standalone 0.8 MTPA SGU. The results indicated that pollutant concentrations (PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>) were well within NAAQS norms. Controlled emission impacts were predicted at various stations, considering GLC values for winter 2023-24. Upon review, the EAC found the air quality assessment satisfactory, noting that the incremental concentrations were already part of the baseline AAQ and within permissible limits.

xvi. The EAC deliberated on the implementation of the Public Hearing (PH) Action Plan and further commitments by JSWSL Salem Works. It was noted that out of the committed Rs. 13 Crores under CER, Rs. 7.82 Crores has been spent across various thematic areas, including sanitation, education, water conservation, health, and community development, in line with the approved EC. **The remaining Rs. 5.18 Crores shall be utilized, with Rs. 1.33 Crores to be spent by JSWCL post-EC splitting and Rs. 3.85 Crores by JSWSL.** The EAC found the progress satisfactory and acknowledged the undertaking submitted by JSWSL in the updated Addendum to the EIA-EMP Report (Jan 2025), ensuring compliance



with the PH commitments.

xvii. The EAC deliberated on the applicability of Public Hearing requirements for any future expansion or modernization of the 0.8 MTPA Slag Grinding Unit, which was earlier granted EC under Para 7(ii) of the EIA Notification, 2006. The Committee emphasized that any such development, if granted under the instant proposal, shall mandatorily involve a Public Hearing. In response, JSW Cement Limited provided an undertaking dated 20th December, 2024, confirming that **any future expansion or modernization beyond the threshold limits specified in the EIA Notification, 2006, and its amendments will involve obtaining ToR and conducting a Public Hearing, if prescribed.** The EAC took note of the commitment and found the response satisfactory.

xviii. JSWSL Salem Works has developed 91 ha of green belt, covering 34.1% of the total land area (268.08 ha), in compliance with the EC condition dated 10/02/2020. As the principal lessor, JSW Steel Limited Salem Works also submitted an undertaking dated 18.04.2024, ensuring compliance with EC conditions and maintaining 33% greenbelt within the JSW complex. The EAC opined that as committed, PP shall comply with the condition for development and maintenance of greenbelt in at least 33% area of the JSW complex as principal lessor.

xix. The EAC advised PP that they need to ensure that both the entities shall have relevant permissions related to land, EC/FC/CTE/CTO and associated permissions required to operate such facilities along with separate entry/exit gates.

xx. **The EAC advised PP to ensure that there shall be sign boards at prominent locations covering name, capacity and area of the operating units within the JSW Complex along with EC/CFO details.**

xxi. **The EAC also advised PP to widely publicize the executive summary of the EC split proposal and publish the split ECs in local newspapers.**

xxii. The EAC also deliberated on the other ADS reply of the project proponent and found it satisfactory.

xxiii. **The EAC is of the opinion that both the entities i.e. JSWSL and JSWCL shall undertake Village Adoption programme as committed.**

xxiv. The EAC deliberated on the written submission of the project proponent and found it satisfactory.

7. The EAC (Industry-1 Sector), in its 73rd EAC Meeting held during 30th – 31st January, 2025, based on information & clarifications provided by the project proponent and after detailed deliberations **recommended** the proposal for splitting the existing EC between JSW Steel Limited (JSWSL) and JSW Cement Limited (JSWCL) subject to stipulation of specific and general EC conditions as detailed in the point below.

8. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1 Sector) hereby **decided to splitting the existing EC between JSW Steel Limited (JSWSL) and JSW Cement Limited (JSWCL)** under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions (**Annexure-I & III**).

9. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

10. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

11. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

12. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of

Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

13. This issues with approval of the competent authority.

(Dinesh Runiwal)  
Scientist 'F'/Director  
Tel: 011-20819346  
Email-d.runiwal@gov.in

#### **Copy To**

1. The Director, Department of Environment and Climate Change, Govt. of Tamil Nadu, No.1, Jeenu Road, Panagal Building, Ground Floor, Saidapet, Chennai-600 015. E-mail: tndoe@nic.in, tamilnadudoe@gmail.com
2. The Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office, 1st Floor, Additional Office Block for GPOA, Shastri Bhawan, Haddows Road, Nungambakkam, Chennai – 600006. E-mail: ro.moefccc@gov.in
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Chief Wildlife Warden, Govt. of Tamil Nadu, Forest Headquarters Building, Near kannikapuram checkpost, Guindy-velacherry main road, Guindy, Chennai 600 032. E-mail : tnforest@nic.in
5. The Chairman, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032. Email-ID: grievance@tnpcb.gov.in
6. The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
7. The District Collector, Collectorate, Salem District, Tamil Nadu– 636001
8. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.
9. Guard File/Monitoring File/Website/Record File/Parivesh Portal.

(Dinesh Runiwal)  
Scientist 'F'/Director

#### **Annexure 1**

#### **Specific EC Conditions for (Metallurgical Industries (ferrous and non ferrous))**

##### **1. Specific**

<b>S. No</b>	<b>EC Conditions</b>
<b>1.1</b>	M/s. JSWSL, being principal lessor shall be held responsible for compliance of all the conditions stipulated in EC dated 10.02.2020.
<b>1.2</b>	The PP shall ensure that both the entities shall have relevant permissions related to land, EC/FC/CTE/CTO, as may be applicable to them, along with associated permissions required to operate such facilities. They shall maintain separate records of the finished products and raw materials for each facility at their respective gates.

S. No	EC Conditions
1.3	The PP shall have clear-cut demarcation of process areas and provide separate entry/exit gates. In case, common infrastructure is used for transportation of raw materials or products/ accessibility by employees, then a MOU between the entities may be undertaken clearly indicating the entity holding responsibility for the common infrastructure.
1.4	The PP shall ensure that there shall be sign boards at prominent locations covering name, capacity and area of the operating units within the JSW Complex along with EC/CFO details.
1.5	The PP shall comply with the condition for development and maintenance of greenbelt in at least 33% area of the JSW complex as principal lessor.
1.6	The PP shall widely publicize the executive summary of the EC split proposal and publish the split ECs in local newspapers within 15 days of grant.
1.7	Both the entities i.e. JSWSL and JSWCL shall undertake Village Adoption programme in consultation with the District Administration.
1.8	The PP shall withdraw the existing EC amendment application and submit a fresh application post-splitting to incorporate all necessary aspects, including new EC post splitting. The amendment shall be obtained at the earliest.
1.9	JSWSL and JSWCL shall strictly comply with the commitments made during EAC appraisal, including additional PH Action Plan.
1.10	Any future expansion or modernization of the 0.8 MTPA Slag Grinding Unit beyond the threshold limits specified in the EIA Notification, 2006, and its amendments shall require obtaining ToR and conducting a Public Hearing, as prescribed.
1.11	All the other terms and conditions stipulated in environmental clearance vide letter dated 10.02.2020 shall remain unchanged.
1.12	The PP shall install the requisite number of CAAQMS linked with CPCB server at designated places.

**Additional EC Conditions**

Not Applicable

**Splitting of EC for the existing 0.8 MTPA Slag Grinding Unit of 1.3 MTPA Integrated Steel Plant between JSW Steel Limited Salem Works and JSW Cement Limited by M/s JSW Steel Limited Salem Works: Unit configuration and capacity as detailed below**

Sl. No.	Facility	Units	As per existing EC		After Present Proposal of Splitting of EC				Remarks
					Balance Units under JSWSL, Salem Works		Unit transferred to JSWCL		
			Config	Total capacity	Config	Total capacity	Config	Total capacity	
1.	Coke Oven Plant (Non Recovery type)	CO (NR)	0.5 MTPA	0.5 MTPA Coke	0.5 MTPA	0.5 MTPA Coke	-	-	No change
2.	Sinter Plants	SP#1 (20 m <sup>2</sup> )	0.175 MTPA	2.12 MTPA Sinter (SP#1 will be removed after installing SP#3)	0.175 MTPA	2.12 MTPA Sinter (SP#1 will be removed after installing SP#3)	-	-	No change
		SP#2 (90 m <sup>2</sup> )	1.06 MTPA		1.06 MTPA		-		
		SP#3 (90 m <sup>2</sup> )	1.06 MTPA		1.06 MTPA		-		
3.	Blast Furnace	BF#1 (402 to 650 m <sup>3</sup> )	0.683 MTPA	1.366 MTPA Hot metal, pig iron (after expansion of 0.367 MTPA BF#1 with 0.316 MTPA)	0.683 MTPA	1.366 MTPA Hot metal, pig iron (after expansion of 0.367 MTPA BF#1 with 0.316 MTPA)	-	-	No change
		BF#2 (650 m <sup>3</sup> )	0.683 MTPA		0.683 MTPA		-		
4.	Pig Casting Machine	PCM	0.30 MTPA	0.30 MTPA Pig Iron	0.30 MTPA	0.30 MTPA Pig Iron	-	-	No change
5.	Energy Optimizing Furnace	EOF#1 (65T)	0.64 MTPA	1.26 MTPA crude Steel	0.64 MTPA	1.26 MTPA crude Steel	-	-	No change
		EOF#2 (65T)	0.62 MTPA		0.62 MTPA		-		

Sl. No.	Facility	Units	As per existing EC		After Present Proposal of Splitting of EC				Remarks
					Balance Units under JSWSL, Salem Works		Unit transferred to JSWCL		
			Config	Total capacity	Config	Total capacity	Config	Total capacity	
6.	Ladle Furnace (65T each)	LF#1 with common VD	65 tons/he at	325 tons/heat liquid steel (After installing LF#5)	65 tons/he at	325 tons/heat liquid steel (After installing LF#5)	-	-	No change
		LF#2	65 tons/he at		65 tons/he at		-		
		LF#3 with common VD	65 tons/he at		65 tons/he at		-		
		LF#4	65 tons/he at		65 tons/he at		-		
		LF#5 with common VD	65 tons/he at		65 tons/he at		-		
7.	Continuous Casting Machine	CCM#1	0.35 MTPA	1.3 MTPA Billets/B looms	0.35 MTPA	1.3 MTPA Billets/B looms	-	-	No change
		CCM#2	0.50 MTPA		0.50 MTPA		-		
		CCM#3	0.45 MTPA		0.45 MTPA		-		
8.	Bar & Rod Mill	BRM	0.48 MTPA	0.48 MTPA Bars, Rods, Flats, Coils	0.48 MTPA	0.48 MTPA Bars, Rods, Flats, Coils	-	-	No change
9.	Blooming Mill	BLM	0.48 MTPA	0.48 MTPA Round Bars, Round Corner Square	0.48 MTPA	0.48 MTPA Round Bars, Round Corner Square	-	-	No change
10.	Pickling & Annealing	-	0.06 MTPA	0.06 MTPA Pickled & Annealed products	0.06 MTPA	0.06 MTPA Pickled & Annealed products	-	-	No change



Sl. No.	Facility	Units	As per existing EC		After Present Proposal of Splitting of EC				Remarks
					Balance Units under JSWSL, Salem Works		Unit transferred to JSWCL		
			Config	Total capacity	Config	Total capacity	Config	Total capacity	
11.	Peeled & ground	-	0.04 MTPA	0.04 MTPA Peeled & Ground products (after installing balance 0.03 MTPA)	0.04 MTPA	0.04 MTPA Peeled & Ground products	-	-	No change
12.	Air Separation Plant	ASP#1	Oxygen - 150 TPD Nitrogen - 108 TPD	Oxygen - 790 TPD Nitrogen - 378 TPD Argon – 25 TPD (After installing ASP #3)	Oxygen - 150 TPD Nitrogen - 108 TPD	Oxygen - 390 TPD Nitrogen - 135 TPD Argon – 25 TPD (After installing ASP #3)	-	-	No change
		ASP#2	Oxygen - 390 TPD Nitrogen - 135 TPD Argon – 15 TPD		Oxygen - 390 TPD Nitrogen - 135 TPD Argon – 15 TPD		-		
		ASP#3	Oxygen - 250 TPD Nitrogen - 135 TPD Argon – 10 TPD		Oxygen - 250 TPD Nitrogen - 135 TPD Argon – 10 TPD		-		
13.	Captive power plant	CPP#1	7 MW	97 MW Power	-	90 MW Power	-	-	Change. CPP#1 (7 MW) has been stopped from 01.10.2021 and the product is withdrawn from CTO. Present capacity of
		CPP#2 (Unit 1 & 2)	2 x 30 MW		2 x 30 MW		-		
		CPP#2 (Unit 3)	1 x 30 MW		1 x 30 MW		-		

Sl. No.	Facility	Units	As per existing EC		After Present Proposal of Splitting of EC				Remarks
					Balance Units under JSWSL, Salem Works		Unit transferred to JSWCL		
			Config	Total capacity	Config	Total capacity	Config	Total capacity	
									CPP is 90 MW.
14.	Slag Grinding Unit	SGU	0.8 MTPA	0.8 MTPA GGBFS	-	-	0.8 MTPA	0.8 MTPA GGBFS	Change. Splitting of EC for the SGU between JSWSL & JSWCL
15.	Paver block	-	25000 Nos. of paver block/d ay	50000 TPA	25000 Nos. of paver block/d ay	50000 TPA	-	-	No change
16.	SMS slag crushing plant	-	50 TPH	226750 TPA	50 TPH	226750 TPA	-	-	No change
17.	Batching plant	-	30 m³/hr	82500 TPA	30 m³/hr	82500 TPA	-	-	No change
18.	DG Sets	-	2 x 1250 KVA 1 x 1750 KVA 3 x 275 KVA 1 x 650 KVA 1 x 400 KVA	2 x 1250 KVA 1 x 1750 KVA 3 x 275 KVA 1 x 650 KVA 1 x 400 KVA	2 x 1250 KVA 1 x 1750 KVA 3 x 275 KVA 1 x 650 KVA 1 x 400 KVA	2 x 1250 KVA 1 x 1750 KVA 3 x 275 KVA 1 x 650 KVA 1 x 400 KVA	-	-	No change

### Project Information, EC Responsibility and Environmental Liability Matrix

#### I. Project Information Matrix including raw material, Environment Management Plan and waste generation

S. No.	Facility / activity granted Prior Environment Clearance along with configuration and capacity of parent EC (E.g.: Configuration, Capacity, Area, Raw Materials, etc.)	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW STEEL LTD. along with configuration and capacity	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW CEMENT LIMITED along with configuration and capacity
1.	<b>Details of Company</b> M/s JSW Steel Limited, Salem Works (Parent company)	<b>Details of Company</b> M/s JSW Steel Limited, Salem Works CIN: L27102MH1994PLC152925	<b>Details of Company</b> M/s JSW Cement Limited CIN: U26957MH2006PLC160839
2.	<b>Overall Integrated Steel Plant Capacities</b> <ul style="list-style-type: none"> <li>Crude Steel - 1.3 MTPA</li> <li>Captive Power - 97 MW</li> <li>Slag Grinding Unit - 0.8 MTPA</li> </ul> Ground Granulated Blast Furnace Slag	<b>Overall Integrated Steel Plant Capacities</b> <ul style="list-style-type: none"> <li>Crude Steel - 1.3 MTPA</li> <li>Captive Power - 90 MW*</li> </ul> <i>*(CPP#1 (1x7 MW) closed in 2021 &amp; withdrawn from CTO)</i>	<b>Overall Plant Capacity</b> <ul style="list-style-type: none"> <li>Slag Grinding Unit - 0.8 MTPA</li> </ul> Ground Granulated Blast Furnace Slag
3.	<b>Project Location</b> Village Pottaneri & M.Kalipatti, Mecheri, Taluk - Mettur, Dist. Salem, Tamil Nadu - 636453	<b>Project Location</b> Village Pottaneri & M.Kalipatti, Mecheri, Taluk - Mettur, Dist. Salem, Tamil Nadu - 636453	<b>Project Location</b> Village Pottaneri & M.Kalipatti, Mecheri, Taluk - Mettur, Dist. Salem, Tamil Nadu - 636453
4.	<b>Geographical Coordinates (Lat. &amp; Long.)</b> ➤ <b>JSW Steel Limited</b> • 11°49'30.00"N - 11°48'44.80" N (Lat.) 77°54'22.34"E - 77°55'37.51" E (Long.)	<b>Geographical Coordinates (Lat. &amp; Long.)</b> ➤ <b>JSW Steel Limited</b> • 11°49'30.00"N - 11°48'44.80" N (Lat.) 77°54'22.34"E - 77°55'37.51" E (Long.)	<b>Geographical Coordinates (Lat. &amp; Long.)</b> ➤ <b>Slag Grinding Unit</b> • 11°48'54.54"N - 11°48'51.69"N (Lat.) 77°54'48.32"E - 77°54'33.29"E (Long.)
5.	<b>Land Details</b> • Total Land: 268.08 ha (Plant area: 237.28 ha & Township : 30.8 ha) • Green Belt: 91.28 ha (34.1 %)	<b>Land Details</b> • Total Land: 265.93 ha (Plant area: 235.13 ha & Township : 30.8 ha) • Green Belt: 90.56 ha (34.1 %)	<b>Land Details</b> • Total Land: 2.15 ha area shall be for Slag grinding unit within the premises of JSWSL Salem Works. • Green Belt: 0.72 ha (33.5 % already developed)
6.	<b>Units/Facilities</b> Coke Oven Plant (Non Recovery type) - 0.5 MTPA	<b>Units/Facilities</b> Coke Oven Plant (Non Recovery type) - 0.5 MTPA	NIL
7.	Sinter Plant - 2.12 MTPA	Sinter Plant - 2.12 MTPA	NIL
8.	Blast Furnace - 1.366 MTPA	Blast Furnace - 1.366 MTPA	NIL
9.	Pig Casting Machine - 0.30 MTPA	Pig Casting Machine - 0.30 MTPA	NIL
10.	Energy Optimizing Furnace - 1.26 MTPA	Energy Optimizing Furnace - 1.26 MTPA	NIL
11.	Ladle Refining Furnace - 325 tons/heat	Ladle Refining Furnace - 325 tons/heat	NIL

S. No.	Facility / activity granted Prior Environment Clearance along with configuration and capacity of parent EC (E.g.: Configuration, Capacity, Area, Raw Materials, etc.)	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW STEEL LTD. along with configuration and capacity	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW CEMENT LIMITED along with configuration and capacity
12.	Continuous Casting Machine - 1.3 MTPA	Continuous Casting Machine - 1.3 MTPA	NIL
13.	Bar & Rod Mill - 0.48 MTPA	Bar & Rod Mill - 0.48 MTPA	NIL
14.	Blooming Mill - 0.48 MTPA	Blooming Mill - 0.48 MTPA	NIL
15.	Pickling & Annealing - 0.06 MTPA	Pickling & Annealing - 0.06 MTPA	NIL
16.	Peeled & ground - 0.04 MTPA	Peeled & ground - 0.04 MTPA	NIL
17.	Air Separation Plant - 790 MTPA	Air Separation Plant - 790 MTPA	NIL
18.	Captive Power Plant - 97 MW	Captive Power Plant - 90 MW	NIL
19.	<b>Slag Grinding Unit - 0.8 MTPA</b>	NIL	<b>Slag Grinding Unit - 0.8 MTPA</b>
20.	<b>Final Products</b> <ul style="list-style-type: none"> <li>Crude Steel: 1.3 MTPA</li> <li>Captive Power Plant: 97 MW</li> <li>Ground Granulated Blast Furnace Slag (GGBFS): 0.8 MTPA</li> </ul>	<b>Final Products</b> <ul style="list-style-type: none"> <li>Crude Steel: 1.3 MTPA</li> <li>Captive Power Plant: 90 MW* <i>*(CPP#1 (1x7 MW) closed in 2021 &amp; withdrawn from CTO)</i></li> </ul>	<b>Final Products</b> <ul style="list-style-type: none"> <li>Ground Granulated Blast Furnace Slag (GGBFS): 0.8 MTPA</li> </ul>
21.	<b>Land Details</b> <ul style="list-style-type: none"> <li>Total Area : 268.08 ha (Plant 237.28 ha &amp; Township : 30.8 ha)</li> <li>Greenbelt Area : 91.28 ha</li> </ul>	<b>Land Details</b> <ul style="list-style-type: none"> <li>Total Area : 265.93 ha (Plant: 235.13 ha &amp; Township : 30.8 ha)</li> <li>Greenbelt Area : 90.56 ha</li> </ul>	<b>Land Details</b> <ul style="list-style-type: none"> <li>Total Area : 2.15 ha</li> <li>Greenbelt Area : 0.72 ha</li> </ul>
22.	<b>Raw Material</b> <ul style="list-style-type: none"> <li>Iron ore fines – 1.47 MTPA</li> <li>Iron ore pellets – 0.5 MTPA</li> <li>Lump ore – 0.705 MTPA</li> <li>Cocking/Non-coking coal – 0.947 MTPA</li> <li>Power plant coal – 0.172 MTPA</li> <li>Coke breeze for SP – 0.023 MTPA</li> <li>Limestone – 0.175 MTPA</li> <li>Dolomite – 0.147 MTPA</li> <li>Quartzite – 0.039 MTPA</li> <li>Dunite – 0.039 MTPA</li> <li>Lime powder – 0.0945 MTPA</li> <li>Mill scale – 0.158 MTPA</li> <li>Purchase coke – 0.156 MTPA</li> <li>Anthracite – 0.095 MTPA</li> <li>BF Slag – 0.88 MTPA (0.48 MTPA in-house &amp; balance from JSWSL Vijayanagar)</li> </ul>	<b>Raw Material</b> <ul style="list-style-type: none"> <li>Iron ore fines – 1.47 MTPA</li> <li>Iron ore pellets – 0.5 MTPA</li> <li>Lump ore – 0.705 MTPA</li> <li>Cocking/Non-coking coal – 0.947 MTPA</li> <li>Power plant coal – 0.172 MTPA</li> <li>Coke breeze for SP – 0.023 MTPA</li> <li>Limestone – 0.175 MTPA</li> <li>Dolomite – 0.147 MTPA</li> <li>Quartzite – 0.039 MTPA</li> <li>Dunite – 0.039 MTPA</li> <li>Lime powder – 0.0945 MTPA</li> <li>Mill scale – 0.158 MTPA</li> <li>Purchase coke – 0.156 MTPA</li> <li>Anthracite – 0.095 MTPA</li> </ul>	<b>Raw Material</b> <ul style="list-style-type: none"> <li>BF Slag – 0.88 MTPA (0.48 MTPA from JSWSL Salem &amp; balance from JSWSL Vijayanagar)</li> </ul>
23.	<b>Water Requirement</b> <ul style="list-style-type: none"> <li>Surface Water: 17727 m3/day for plant operation</li> </ul>	<b>Water Requirement</b> <ul style="list-style-type: none"> <li>Surface Water: 17722 m3/day for plant operation</li> </ul>	<b>Water Requirement</b> <ul style="list-style-type: none"> <li>Surface Water: 5 m3/day of water required for drinking</li> </ul>



S. No.	Facility / activity granted Prior Environment Clearance along with configuration and capacity of parent EC (E.g.: Configuration, Capacity, Area, Raw Materials, etc.)	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW STEEL LTD. along with configuration and capacity	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW CEMENT LIMITED along with configuration and capacity
	<ul style="list-style-type: none"> <li>Ground Water: 80 KLD for Drinking &amp; Domestic use</li> </ul>	<ul style="list-style-type: none"> <li>Ground Water: 80 KLD for Drinking &amp; Domestic use</li> </ul>	<p>and domestic purpose of Slag Grinding unit, which will be supplied by JSWSL Salem Works from its existing quota.</p> <ul style="list-style-type: none"> <li>Ground Water: Not required.</li> </ul>
24.	<b>Power Requirement - 101.5 MW</b>	<b>Power Requirement – 96.3 MW</b> (However, during transition period, JSWSL shall supply maximum of 5.2 MW power to JSWCL for SGU operation)	<b>Power Requirement - 5.2 MW;</b> JSWSL shall supply power till JSWCL gets independent power from TANGEDCO.
25.	<b>Fuel Requirement</b> <ul style="list-style-type: none"> <li>High Speed Diesel – 3.3 KLD</li> <li>Liquid petroleum Gas – 1.015 TPD</li> <li>By-product gases – <ul style="list-style-type: none"> <li>BF gas generation: 260000 Nm3/hr</li> <li>BF gas consumption in networks &amp; Shop floors: 258133 Nm3/hr</li> <li>Excess BF gas available: 1867 Nm3/hr</li> </ul> </li> </ul>	<b>Fuel Requirement</b> <ul style="list-style-type: none"> <li>High Speed Diesel – 3.3 KLD</li> <li>Liquid petroleum Gas – 1.015 TPD</li> <li>By-product gases – <ul style="list-style-type: none"> <li>BF gas generation: 260000 Nm3/hr</li> <li>BF gas consumption in networks &amp; Shop floors: 258133 Nm3/hr</li> <li>Excess BF gas available: 1867 Nm3/hr</li> </ul> </li> </ul>	<b>Fuel Requirement</b> <ul style="list-style-type: none"> <li>BF Gas – 6000 Nm3/hr (from BF Gas network of JSW Steel)</li> <li>Waste Hot gases from sinter plant – 1,50,000 Nm3/hr (from SP#2 circular cooler)</li> <li>High Speed Diesel – only for HAG start up</li> </ul>
26.	<b>GHG emission: 2.72 tCO2/tonne crude steel</b>	<b>GHG emission: 2.67 tCO2/tonne crude steel</b>	<b>GHG emission: 0.05 tCO2/tonne GGBFS</b>
27.	<b>Specific Energy Consumption: 6.05 Gcal/tonne crude steel</b>	<b>Specific Energy Consumption: 6.021 Gcal/tonne crude steel</b>	<b>Specific Energy Consumption: 0.029 Gcal/tonne GGBFS</b>
28.	<b>Pollutants Load</b> <i>Stack emission load:</i> <ul style="list-style-type: none"> <li>PM – 297.97 kg/hr</li> <li>SO<sub>2</sub> – 268.37 kg/hr</li> <li>NO<sub>x</sub> – 190.15 kg/hr</li> </ul> <i>Fugitive emission load:</i> <ul style="list-style-type: none"> <li>PM<sub>10</sub> – 1.178 g/s</li> <li>PM<sub>2.5</sub> – 0.285 g/s</li> </ul>	<b>Pollutants Load</b> <i>Stack emission load:</i> <ul style="list-style-type: none"> <li>PM – 296.17 kg/hr</li> <li>SO<sub>2</sub> – 266.07 kg/hr</li> <li>NO<sub>x</sub> – 188.64 kg/hr</li> </ul> <i>Fugitive emission load:</i> <ul style="list-style-type: none"> <li>PM<sub>10</sub> – 1.093 g/s</li> <li>PM<sub>2.5</sub> – 0.265 g/s</li> </ul>	<b>Pollutants Load</b> <i>Stack emission load:</i> <ul style="list-style-type: none"> <li>PM – 1.80 kg/hr</li> <li>SO<sub>2</sub> – 2.30 kg/hr</li> <li>NO<sub>x</sub> – 1.51 kg/hr</li> </ul> <i>Fugitive emission load:</i> <ul style="list-style-type: none"> <li>PM<sub>10</sub> – 0.085 g/s</li> <li>PM<sub>2.5</sub> – 0.020 g/s</li> </ul>
29.	<b>Air Environment</b> <ul style="list-style-type: none"> <li>Wagon tippler system is adopted for reduce the air pollution in the raw material unloading area.</li> <li>Raw materials are being stored in covered shed with dust suppression system.</li> </ul>	<b>Air Environment</b> <ul style="list-style-type: none"> <li>Wagon tippler system is adopted for reduce the air pollution in the raw material unloading area.</li> <li>Raw materials are being stored in covered shed with dust suppression system.</li> </ul>	<b>Air Environment</b> <ul style="list-style-type: none"> <li>Bag filters for Slag Grinding mill.</li> <li>Bag filters for Silo top &amp; Silo extraction.</li> <li>Roads, drains and paved areas</li> </ul>

S. No.	Facility / activity granted Prior Environment Clearance along with configuration and capacity of parent EC (E.g.: Configuration, Capacity, Area, Raw Materials, etc.)	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW STEEL LTD. along with configuration and capacity	Facility / activity granted Prior Environment Clearance proposed to transfer to JSW CEMENT LIMITED along with configuration and capacity
	<ul style="list-style-type: none"> <li>• Transportation of raw materials through closed belt conveyors where water sprinklers are installed.</li> <li>• All transfer points of raw material handling system are attached with dedusting and Bag filters.</li> <li>• The flue gas from the processes is being treated in appropriate APC measures (ESP, Bag Filter, Multicyclone, GCP, Etc.,) and dispersed into atmosphere through various stacks.</li> <li>• Primary (Fumes Extraction) and Secondary dedusting systems are provided in Blast furnace and Steel melting shop processes. Adequate APC measures also provided before dispersing into atmosphere.</li> <li>• Sensible waste heat from Coke oven is utilized in Boiler for cater 65 % power requirement.</li> <li>• 18 KM concrete road provided inside the plant connectivity to avoid fugitive emission during vehicle movement.</li> <li>• Dedicated road sweeping machine provided to clean the entire plant internal roads to minimize fugitive emissions.</li> <li>• Ash &amp; Flue dust collected from the processes is conveyed silos through closed pneumatic system.</li> <li>• Regular housekeeping is being imparted to keep the plant premises neat &amp; Clean.</li> <li>• Wind Net provided in the raw material storage area to minimize air borne dust.</li> <li>• Mobile dedusting installed for skull cutting for minimise fugitive emission.</li> <li>• Bag filters for Slag Grinding mill.</li> <li>• Bag filters for Silo top &amp; Silo extraction.</li> </ul> <p><u>Air Pollution Control Devices</u> Total 73 nos. of stacks are present under 1.15 MTPA ISP along with 0.8 MTPA SGU. APCDs are as following-</p> <ul style="list-style-type: none"> <li>• Baghouse filter: 22 nos.</li> <li>• ESP: 04 nos.</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation of raw materials through closed belt conveyors where water sprinklers are installed.</li> <li>• All transfer points of raw material handling system are attached with dedusting and Bag filters.</li> <li>• The flue gas from the processes is being treated in appropriate APC measures (ESP, Bag Filter, Multicyclone, GCP etc.,) and dispersed into atmosphere through various stacks.</li> <li>• Primary (Fumes Extraction) and Secondary dedusting systems are provided in Blast furnace and Steel melting shop processes. Adequate APC measures also provided before dispersing into atmosphere.</li> <li>• Sensible waste heat from Coke oven is utilized in Boiler for cater 65 % power requirement.</li> <li>• 18 KM concrete road provided inside the plant connectivity to avoid fugitive emission during vehicle movement.</li> <li>• Dedicated road sweeping machine provided to clean the entire plant internal roads to minimize fugitive emissions.</li> <li>• Ash &amp; Flue dust collected from the processes is conveyed silos through closed pneumatic system.</li> <li>• Regular housekeeping is being imparted to keep the plant premises neat &amp; Clean.</li> <li>• Wind Net provided in the raw material storage area to minimize air borne dust.</li> <li>• Mobile dedusting installed for skull cutting for minimize fugitive emission.</li> </ul> <p><u>Air Pollution Control Devices</u> Total 70 nos. of stacks shall be under 1.15 MTPA ISP. APCDs are as following-</p> <ul style="list-style-type: none"> <li>• Baghouse filter: 21 nos.</li> </ul>	<p><u>Air Pollution Control Devices</u> Total 03 nos. of stacks shall be under the 0.8 MTPA SGU. APCDs are as following-</p> <ul style="list-style-type: none"> <li>• Baghouse filter: 01 no.</li> <li>• Damper with vent stack: 02 nos.</li> </ul> <p><u>EMP Cost</u> Capital Cost: INR 185 Lakhs Recurring Cost: INR 25 Lakhs/annum</p>

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	<ul style="list-style-type: none"> <li>Stack: 25 nos.</li> <li>Common stack: 02 nos.</li> <li>Multicyclone: 01 no.</li> <li>Venturi Scrubber: 03 nos.</li> <li>Wet Scrubber: 01 no.</li> <li>Grit arrestor: 01 no.</li> <li>Acoustic enclosures with stack: 12 nos.</li> <li>Damper with vent stack: 02 nos.</li> </ul> <b>EMP Cost</b> Capital Cost: INR 38253 Lakhs Recurring Cost: INR 3851 Lakhs/annum	<ul style="list-style-type: none"> <li>ESP: 04 nos.</li> <li>Stack: 25 nos.</li> <li>Common stack: 02 nos.</li> <li>Multicyclone: 01 no.</li> <li>Venturi Scrubber: 03 nos.</li> <li>Wet Scrubber: 01 no.</li> <li>Grit arrestor: 01 no.</li> <li>Acoustic enclosures with stack: 12 nos.</li> </ul> <b>EMP Cost</b> Capital Cost: INR 38068 Lakhs Recurring Cost: INR 3826 Lakhs/annum	
30.	<b>Water Environment - Effluents Generation and Management</b> <ul style="list-style-type: none"> <li>At present capacity of 1.15 MTPA stage, total effluent quantity is 3013.8 KLD. As such, the trade effluent generation is 2935 KLD from steel plant and 78.8 KLD from Pickling plant (78.50 KLD) &amp; Etching lab (0.30 KLD) of the steel plant. The treated water from Guard Pond ETP is being reused in steel plant for cooling applications, dust suppression system and green belt development. The treated effluent from Annealing ETP (RO-ZLD &amp; MEE) is being reused in pickling &amp; etching lab process.</li> <li>RO plants installed in the upstream of water system. Trade effluent from the process and partially treated effluent from CPP#2 is being generated in total 3275 KLD. UF &amp; RO reject is being used partially for green belt maintenance. Remaining is being treated along with trade effluent in the guard pond and further reused in steel the plant for secondary cooling application, dust suppression and greenbelt development and ZLD is ensured, except runoff rain water from rainy season.</li> <li>Treated water from Sewage Treatment Plants (Capacity: Township- 200 KLD &amp; Plant- 100 KLD) is being reused to develop greenbelt in respective areas.</li> </ul>	<b>Water Environment - Effluents Generation and Management</b> <ul style="list-style-type: none"> <li>RO plants installed in the upstream of water system. Trade effluent from the process and partially treated effluent from CPP is being generated in total 3275 KLD. UF &amp; RO reject is being used partially for green belt maintenance. Remaining is being treated along with trade effluent in the guard pond and further reused in steel the plant for secondary cooling application, dust suppression and greenbelt development and ZLD is ensured, except runoff rain water from rainy season.</li> <li>Treated water from Sewage Treatment Plants (Capacity: Township- 200 KLD &amp; Plant- 100 KLD) is being reused to develop greenbelt in respective areas.</li> </ul>	<b>Water Environment - Effluents Generation and Management</b> <ul style="list-style-type: none"> <li>Since slag grinding is a dry process, no effluent is generated from Slag Grinding unit for production of GGBFS, except for sewage.</li> <li>Domestic effluent quantity is approx. 1 m<sup>3</sup>/day and discharged into septic tanks followed by soak pits.</li> </ul> <b>Water &amp; Wastewater Treatment facilities</b> <ul style="list-style-type: none"> <li>ETP for SGU: None</li> <li>STP for SGU: None</li> </ul> <b>EMP Cost</b> Capital Cost: Nil Recurring Cost: INR 2.5 Lakhs/annum



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	<p>develop greenbelt in respective areas. <i>Water &amp; Wastewater Treatment facilities</i></p> <ul style="list-style-type: none"> <li>• WTPs: 03 nos.</li> <li>• ETPs: 03 nos.</li> <li>• STPs: 02 nos.</li> <li>• RWH Pond: 04 nos.</li> <li>• ETP for SGU: None</li> <li>• STP for SGU: None</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 9876 Lakhs Recurring Cost: INR 604.5 Lakhs/annum</p>		
31.	<p><b>Noise Environment</b></p> <ul style="list-style-type: none"> <li>• Hood system for all the raw material handling and crushing system.</li> <li>• Silencer installation wherever high/medium pressure steam used for the power generation and the process requirement.</li> <li>• Dedicated hood system to control/minimize noise pollution in hot saw operations.</li> <li>• Green belt also contributing to noise minimization to certain extent.</li> <li>• Usage of appropriate PPEs with respect to noise level and signboards displayed at the strategic locations of the various departments showing the mandatory PPEs for particular unit.</li> <li>• Sound barriers/ walls provided wherever feasible</li> <li>• Compressors installed within enclosed rooms</li> <li>• Administrative control.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 365 Lakhs Recurring Cost: INR 14.6 Lakhs/annum</p>	<p><b>Noise Environment</b></p> <ul style="list-style-type: none"> <li>• Hood system for all the raw material handling and crushing system.</li> <li>• Silencer installation wherever high/medium pressure steam used for the power generation and the process requirement.</li> <li>• Dedicated hood system to control/minimize noise pollution in hot saw operations.</li> <li>• Green belt also contributing to noise minimization to certain extent.</li> <li>• Usage of appropriate PPEs with respect to noise level and signboards displayed at the strategic locations of the various departments showing the mandatory PPEs for particular unit.</li> <li>• Sound barriers/ walls provided wherever feasible</li> <li>• Compressors installed within enclosed rooms</li> <li>• Administrative control.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 351 Lakhs Recurring Cost: INR 14.1 Lakhs/annum</p>	<p><b>Noise Environment</b></p> <ul style="list-style-type: none"> <li>• Sound barriers/ walls provided wherever feasible</li> <li>• Compressors installed within enclosed rooms</li> <li>• Administrative control.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 14 Lakhs Recurring Cost: INR 0.5 Lakhs/annum</p>
32.	<p><b>Land Environment - Solid and Hazardous Wastes</b></p> <ul style="list-style-type: none"> <li>• JSW is taking all initiatives for achieving 100% utilization of solid wastes generated from the plant.</li> <li>• State of the art technologies like Slag Grinding unit (GGBFS), Paver block making facilities, SMS Slag crusher etc. have already been installed.</li> </ul>	<p><b>Land Environment - Solid and Hazardous Wastes</b></p> <ul style="list-style-type: none"> <li>• JSW is taking all initiatives for achieving 100% utilization of solid wastes generated from the plant.</li> <li>• State of the art technologies like Paver block making facilities, SMS Slag crusher etc. have already been installed.</li> </ul>	<p><b>Land Environment - Solid and Hazardous Wastes</b></p> <ul style="list-style-type: none"> <li>• No solid waste generated from GGBFS unit</li> <li>• 100% utilization of BF slag generated from BF unit is being utilized as Waste-to-Wealth.</li> <li>• Hazardous wastes in the</li> </ul>



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	<p>Non-Hazardous (utilized in within plant premises):</p> <ul style="list-style-type: none"> <li>BF Slag: 1350 TPD</li> <li>SMS Slag: 720 TPD</li> <li>Dust, Sludge: 199.66 TPD</li> </ul> <p>Hazardous:</p> <ul style="list-style-type: none"> <li>Used oil, Phosphate Sludge, Salt of ZLD of ETP: 2.74 TPD</li> </ul> <p>All hazardous waste is being handed over to authorized agencies as recognized by SPCB.</p> <p><b>EMP Cost</b> Capital Cost: INR 4590 Lakhs Recurring Cost: INR 52 Lakhs/annum</p>	<p>Non-Hazardous (utilized in within plant premises):</p> <ul style="list-style-type: none"> <li>BF Slag: 1350 TPD</li> <li>SMS Slag: 720 TPD</li> <li>Dust, Sludge: 199.66 TPD</li> </ul> <p>Hazardous:</p> <ul style="list-style-type: none"> <li>Used oil, Phosphate Sludge, Salt of ZLD of ETP: 2.74 TPD</li> </ul> <p>All hazardous waste is being handed over to authorized agencies as recognized by SPCB.</p> <p><b>EMP Cost</b> Capital Cost: INR 4587 Lakhs Recurring Cost: INR 50 Lakhs/annum</p>	<p>form of used grease (~1 TPA), oil-soaked cotton waste (~1 TPA) and used oil (~ 1 KLA) from GGBFS facility is being stored in designated area before being handed over to authorized agencies as recognized by SPCB.</p> <p><b>EMP Cost</b> Capital Cost: INR 3 Lakhs Recurring Cost: INR 2 Lakhs/annum</p>
33.	<p><b>Ecology – Greenbelt development</b></p> <ul style="list-style-type: none"> <li>All technological measures to minimise air emissions, generation of effluents (including contaminated storm water) and noise generation have been incorporated in the design of the operational units.</li> <li>An elaborate green belt / cover is envisaged within and around the plant to ameliorate the fugitive emissions and noise from the operation of the plant.</li> <li>Existing green belt &amp; plantations developed in 91.28 ha.</li> <li>Further greenbelt is being developed around the plant boundary and areas within the plant.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 64 Lakhs Recurring Cost: INR 117 Lakhs/annum</p>	<p><b>Ecology – Greenbelt development</b></p> <ul style="list-style-type: none"> <li>All technological measures to minimise air emissions, generation of effluents (including contaminated storm water) and noise generation have been incorporated in the design of the operational units.</li> <li>An elaborate green belt / cover is envisaged within and around the plant to ameliorate the fugitive emissions and noise from the operation of the plant.</li> <li>Existing green belt &amp; plantations developed in 91.28 ha.</li> <li>Further greenbelt is being developed around the plant boundary and areas within the plant.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 9 Lakhs Recurring Cost: INR 106 Lakhs/annum</p>	<p><b>Ecology – Greenbelt development</b></p> <ul style="list-style-type: none"> <li>All technological measures to minimise air emissions and noise generation have been incorporated in the design of the GGBFS unit.</li> <li>Existing green belt &amp; plantations developed in 0.72 ha within the GGBFS complex.</li> </ul> <p><b>EMP Cost</b> Capital Cost: INR 55 Lakhs Recurring Cost: INR 11 Lakhs/annum</p>

## **II. EC Responsibility Matrix**

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
<b>A. Specific Conditions</b>		
i.	Particulate emission from the rod mill of slag grinding unit shall be less than 10 mg/Nm <sup>3</sup> .	<b>Revised EC Condition - Nil</b>  <b>Remarks:</b> The same condition shall not be applicable after grant of splitting of EC for Slag Grinding unit to M/s JSWCL.
ii.	Green belt shall be developed in an area of 85 ha in and around the plant area in a time frame of two years.	<b>Revised EC Condition -</b> Green belt shall be developed in an area of 85 ha in and around the plant area in a time frame of two years.
<b>B. General Conditions</b>		
<b>I. Statutory Compliance</b>		
i.	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	<b>Revised EC Condition -</b> The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
ii.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	<b>Revised EC Condition -</b> The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	<b>Revised EC Condition -</b> The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
<b>II. Air quality monitoring and preservation</b>		
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	<b>Revised EC Condition -</b> The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.	<b>Revised EC Condition</b> - The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
iii.	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.	<b>Revised EC Condition</b> - The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
iv.	The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.	<b>Revised EC Condition</b> - The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
v.	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	<b>Revised EC Condition</b> - Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
vi.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	<b>Revised EC Condition</b> - The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
vii.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	<b>Revised EC Condition</b> - Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
viii.	The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.	<b>Revised EC Condition</b> - The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
ix.	Secondary emission control system shall be provided at SMS Converters.	<b>Revised EC Condition</b> - Secondary emission control system shall be provided at SMS Converters.
x.	Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.	<b>Revised EC Condition</b> - Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.



Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
xi.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	<b>Revised EC Condition</b> - Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
xii.	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.	<b>Revised EC Condition</b> - Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
xiii.	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	<b>Revised EC Condition</b> - The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
xiv.	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	<b>Revised EC Condition</b> - Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
xv.	Land-based APC system shall be installed to control coke pushing emissions.	<b>Revised EC Condition</b> - Land-based APC system shall be installed to control coke pushing emissions.
xvi.	Monitor CO, HC and O <sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	<b>Revised EC Condition</b> - Monitor CO, HC and O <sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
xvii.	Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	<b>Revised EC Condition</b> – Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
xviii.	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO <sub>x</sub> control facility shall be provided to meet the prescribed standards.	<b>Revised EC Condition</b> – In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO <sub>x</sub> control facility shall be provided to meet the prescribed standards.
xix.	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.	<b>Revised EC Condition</b> - The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
xx.	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	<b>Revised EC Condition</b> - Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
xxi.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	<b>Revised EC Condition</b> - Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.



Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
xxii.	The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.	<b>Revised EC Condition</b> - The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.
xxiii.	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke	<b>Revised EC Condition</b> - Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke
<b>III. Water quality monitoring and preservation</b>		
i.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 3 pt March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.	<b>Revised EC Condition</b> - The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 3 pt March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
ii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	<b>Revised EC Condition</b> - The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
iii.	The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time.	<b>Revised EC Condition</b> - The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time.
iv.	Adhere to 'Zero Liquid Discharge'.	<b>Revised EC Condition</b> - Adhere to 'Zero Liquid Discharge'.

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
v.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	<b>Revised EC Condition</b> - Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
vi.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	<b>Revised EC Condition</b> - Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
vii.	Tyre washing facilities shall be provided at the entrance of the plant gates.	<b>Revised EC Condition</b> - Tyre washing facilities shall be provided at the entrance of the plant gates.
viii.	CO <sub>2</sub> injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	<b>Revised EC Condition</b> - CO <sub>2</sub> injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
ix.	The project proponent shall practice rainwater harvesting to maximum possible extent.	<b>Revised EC Condition</b> - The project proponent shall practice rainwater harvesting to maximum possible extent.
x.	Treated water from ETP of COBP shall not be used for coke quenching.	<b>Revised EC Condition</b> - Treated water from ETP of COBP shall not be used for coke quenching.
xi.	Water meters shall be provided at the inlet to all unit processes in the steel plants.	<b>Revised EC Condition</b> - Water meters shall be provided at the inlet to all unit processes in the steel plants.
xii.	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	<b>Revised EC Condition</b> - The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
<b>IV. Noise monitoring and prevention</b>		
i.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	<b>Revised EC Condition</b> - Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	<b>Revised EC Condition</b> - The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
<b>V. Energy Conservation measures</b>		
i.	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.	<b>Revised EC Condition</b> - The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
ii.	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens.	<b>Revised EC Condition</b> - Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens.
iii.	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.	<b>Revised EC Condition</b> - Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
iv.	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	<b>Revised EC Condition</b> - Provide suitable covers for open top ladles for transfer of hot metal.
v.	Use hot charging of slabs and billets/blooms as far as possible.	<b>Revised EC Condition</b> - Use hot charging of slabs and billets/blooms as far as possible.
vi.	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.	<b>Revised EC Condition</b> - Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
vii.	Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.	<b>Revised EC Condition</b> - Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
viii.	Restrict Gas flaring to < 1%.	<b>Revised EC Condition</b> - Restrict Gas flaring to < 1%.
ix.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	<b>Revised EC Condition</b> - Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
x.	Provide LED lights in their offices and residential areas.	<b>Revised EC Condition</b> - Provide LED lights in their offices and residential areas.
xi.	Ensure installation of regenerative type burners on all reheating furnaces.	<b>Revised EC Condition</b> - Ensure installation of regenerative type burners on all reheating furnaces.
<b>VI. Waste management</b>		
i.	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.	<b>Revised EC Condition</b> - An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
ii.	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.	<b>Revised EC Condition</b> - In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.
iii.	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).	<b>Revised EC Condition</b> - Nil <b>Remarks:</b> The existing Coke Ovens are non-recovery type.
iv.	Carbon recovery plant to recover the elemental carbon present in OCP slurries for use in Sinter plant shall be installed.	<b>Revised EC Condition</b> - Carbon recovery plant to recover the elemental carbon present in OCP slurries for use in Sinter plant shall be installed.
v.	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	<b>Revised EC Condition</b> - Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
vi.	Used refractories shall be recycled as far as possible.	<b>Revised EC Condition</b> - Used refractories shall be recycled as far as possible.



Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
vii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	<b>Revised EC Condition</b> - SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
viii.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	<b>Revised EC Condition</b> - 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
ix.	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles In cold rolled coil storage area.	<b>Revised EC Condition</b> - Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles In cold rolled coil storage area.
x.	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules,2016. Coal tar sludge / decanter shall be recycled to coke ovens.	<b>Revised EC Condition</b> - The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules,2016. Coal tar sludge / decanter shall be recycled to coke ovens.
xi.	Kitchen waste shall be composted or converted to biogas for further use.	<b>Revised EC Condition</b> - Kitchen waste shall be composted or converted to biogas for further use.
<b>VII. Green Belt</b>		
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant	<b>Revised EC Condition</b> - Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
ii.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	<b>Revised EC Condition</b> - The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
<b>VIII. Public hearing and Human health issues</b>		
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<b>Revised EC Condition</b> - Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.



Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	<b>Revised EC Condition</b> - The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<b>Revised EC Condition</b> - Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<b>Revised EC Condition</b> - Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
<b>IX. Corporate Environment Responsibility</b>		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	<b>Revised EC Condition</b> - The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest /wildlife norms / conditions. The company shall have defined system of reporting infringements /deviation / violation of the environmental/forest/ wildlife norms/ conditions and / or shareholders' / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	<b>Revised EC Condition</b> - The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest /wildlife norms / conditions. The company shall have defined system of reporting infringements /deviation / violation of the environmental/forest/ wildlife norms/ conditions and / or shareholders' / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	<b>Revised EC Condition</b> - A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by	<b>Revised EC Condition</b> - Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
	competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.	wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry /Regional Office along with the Six Monthly Compliance Report.
v.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	<b>Revised EC Condition</b> - Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.	<b>Revised EC Condition</b> - All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.
<b>X. Miscellaneous</b>		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	<b>Revised EC Condition</b> - The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	<b>Revised EC Condition</b> - The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	<b>Revised EC Condition</b> - The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
iv.	The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	<b>Revised EC Condition</b> - The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	<b>Revised EC Condition</b> - The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
vi.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	<b>Revised EC Condition</b> - The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
vii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	<b>Revised EC Condition</b> - The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	<b>Revised EC Condition</b> - The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	<b>Revised EC Condition</b> - The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	<b>Revised EC Condition</b> - No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
xi.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	<b>Revised EC Condition</b> - The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
xiii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	<b>Revised EC Condition</b> - The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.



Sl. No.	EC conditions of JSWSL Salem Works as per existing EC letter dated 10/02/2020	Revised Environmental Conditions after Proposed Splitting of EC Parent Company (JSWSL Salem Works)
xiv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data information/ monitoring reports.	<b>Revised EC Condition</b> - The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data information/ monitoring reports.
xv.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	<b>Revised EC Condition</b> - The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
xvi.	Any Appeal against the EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	<b>Revised EC Condition</b> - Any Appeal against the EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

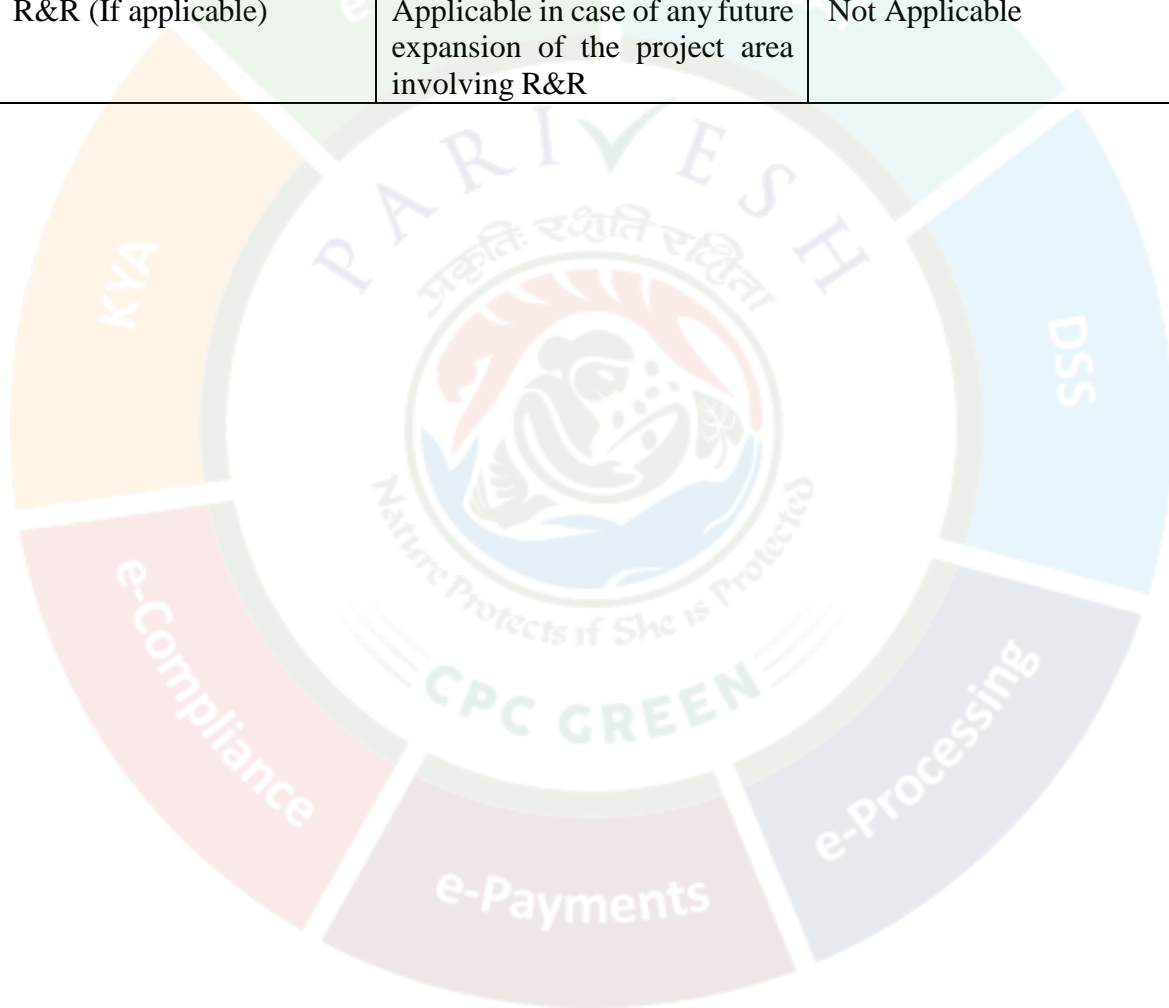
### **III. Environmental Liability Matrix**

Sl. No	Environmental Liability	Parent Company JSWSL	Transferee Company JSWCL
<b>1. Compliance Obligations</b>			
1.	EC Compliance	Timely submission of Compliance to EC Conditions for the 1.3 MTPA Plant shall be the responsibility of JSWSL	Timely submission of Compliance to EC Conditions for the existing 0.8 MTPA Slag Grinding Unit shall be the responsibility of JSWCL
2.	CTE Compliance	Applicable for the 1.3 MTPA Steel Plant	-
3.	CTO Compliance	Applicable for the 1.3 MTPA Steel Plant	Applicable for the 0.8 MTPA Cement Plant
4.	Compliance to Hazardous waste mgmt. rules	Applicable for the 1.3 MTPA Steel Plant	Applicable for the 0.8 MTPA Cement Plant
5.	Compliance to Plastic waste mgmt. rules	Applicable for the 1.3 MTPA Steel Plant	Applicable for the 0.8 MTPA Cement Plant
6.	Compliance to E waste mgmt. rules	Applicable for the 1.3 MTPA Steel Plant	Applicable for the 0.8 MTPA Cement Plant
7.	Compliance to Bio medical	Applicable for Bio-medical	Not applicable. JSWCL shall use



Sl. No	Environmental Liability	Parent Company JSWSL	Transferee Company JSWCL
	mgmt. rules	wastes of JSW Occupational Health Centre	the facility of Occupational Health Centre of JSWSL Salem Works as per MoU
<b>2. Remediation/Mitigation obligations</b>			
8.	EMP Measures	CAPEX and OPEX expenditure towards implementation of EMP Measures for the 1.3 MTPA Steel Plant shall be the responsibility of JSWSL	CAPEX and OPEX expenditure towards implementation of EMP Measures for the 0.8 MTPA Slag Grinding Unit shall be the responsibility of JSWCL
9.	Greenbelt Development	Development of minimum 33% of GB shall be the responsibility of JSWSL	Development of minimum 33% of GB shall be the responsibility of JSWCL
10	Remediation Plan (If Applicable)	In case of Violation of EC for the 1.3 MTPA Steel Plant, Expenditure towards mitigative measures for the Remediation Plan shall be the responsibility of JSWSL	In case of Violation of EC for the 0.8 MTPA Slag Grinding Unit, Expenditure towards mitigative measures for the Remediation Plan shall be the responsibility of JSWCL
11	Natural and Community Resource Augmentation Plan (if applicable)	In case of Violation of EC for the 1.3 MTPA Steel Plant, Expenditure towards mitigative measures for the Natural and Community Resource Augmentation Plan shall be the responsibility of JSWSL	In case of Violation of EC for the 0.8 MTPA Slag Grinding Unit, Expenditure towards mitigative measures for the Natural and Community Resource Augmentation Plan shall be the responsibility of JSWCL
<b>3. Fines and penalties</b>			
12	Liability towards reply to Show cause Notices	In case of issuance of Show Cause Notice regarding any Environmental Issues related to the 1.3 MTPA Steel Plant, JSWSL shall be liable.	In case of issuance of Show Cause Notice regarding any Environmental Issues related to the 0.8 MTPA Slag Grinding Unit, JSWCL shall be liable.
13	Directions issued by CPCB SPCB	In case of issuance of Directions under The Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 or The Environment (Protection) Act, 1986 related to the 1.3 MTPA Steel Plant, JSWSL shall be liable.	In case of issuance of Directions under The Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 or The Environment (Protection) Act, 1986 related to the 0.8 MTPA Slag Grinding Unit, JSWCL shall be liable.
14	Penalty due to EIA Violation	In case of violation of EIA Notification, 2006 by the 1.3 MTPA Steel Plant, payment towards any penalty as applicable shall be the responsibility of JSWSL	In case of violation of EIA Notification, 2006 by the 0.8 MTPA Slag Grinding Unit, payment towards any penalty as applicable shall be the responsibility of JSWCL

Sl. No	Environmental Liability	Parent Company JSWSL	Transferee Company JSWCL
15	Penalty due to failure in Compliance to Directions	In case of failure in Compliance to Directions by the 13 MTPA Steel Plant, payment towards any penalty or any other punishment as applicable shall be the responsibility of JSWSL	In case of failure in Compliance to Directions by the proposed expanded 6 MTPA Cement Plant, payment towards any penalty or any other punishment as applicable shall be the responsibility of JSWCL
<b>4. Compensation obligations/Punitive Damages</b>			
16	Due to Fines & Penalties	In case of issuance of any Fines or Penalties to the 1.3 MTPA Steel Plant, JSWSL shall be liable.	In case of issuance of any Fines or Penalties to the 0.8 MTPA Slag Grinding Unit, JSWSL shall be liable.
<b>5. Rehabilitation Obligations</b>			
17	R&R (If applicable)	Applicable in case of any future expansion of the project area involving R&R	Not Applicable



## Action Plan for balance ESC expenditure by JSWSL Salem Works

Sl. No.	Activities	FY- 25 (Rs. in Crores) (H2 Oct -March 25) Steel	FY- 26 (Rs. in Crores) Steel	FY-27 (Rs. in Crores) Steel	FY-28 (Rs. in Crores) Steel	Total (Rs.in Crs) JSWSL
1	Agriculture	-	0.08	0.09	0.09	0.27
2	Education	-	0.19	0.19	0.09	0.48
3	Environment	-	0.23	0.14	0.14	0.52
4	Health	-	0.14	0.14	0.09	0.38
5	Sanitation	-	0.24	0.24	0.14	0.63
6	School Infrastructure	-	0.09	0.09	0.09	0.28
7	Sports	-	0.09	0.09	0.09	0.28
8	Water	-	0.14	0.15	0.14	0.43
9	Community Development	0.2	0.06	0.06	0.06	0.38
10	Others	-	0.09	0.04	0.09	0.23
<b>Total</b>		<b>0.2</b>	<b>1.37</b>	<b>1.25</b>	<b>1.04</b>	<b>3.85</b>