

Date: 21/11/2022

To,  
The Member Secretary (Industry-I)  
Ministry of Environment, Forest & Climate Change  
Indira Paryavaran Bhavan,  
Jor Bagh, Lodi Road  
New Delhi- 110003

**Subject: Reply of ADS sought by EAC committee Industry-1 for obtaining Environmental Clearance for proposed greenfield metallurgical unit – Steel Manufacturing unit comprising of TMT Bars + Wire Rod – 4,50,000 TPA, 500 TPD DRI kiln along with Captive Power Plant consisting of 25 MW Turbine and 50 TPH steam from Waste Heat Recovery Boiler facility located at Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka: Anjar, District: Kutch, Gujarat, India by M/s. Anjar TMT Steel Private Limited**

- Ref.: 1. Proposal No.: IA/GJ/IND/221430/2021**  
**2. ToR Letter No.F. No. J-11011/289/2021-IA-II(I)dated 31<sup>st</sup> August 2021**  
**3. Meeting Agenda For 10<sup>th</sup> Expert Appraisal (industry-1 sector) meeting to be held during August 1-3, 2022 (Item No. 10.3 )**  
**4. Minutes of 10<sup>th</sup> Expert Appraisal (industry-1 sector) meeting to be held during August 1-3, 2022**  
**5. ADS generated dated on**

**Category.: A, 3 (a) Metallurgical industries**  
**1 (d) Thermal Power Plants (CPP)**

Dear Sir/Madam,

With reference to above subject matter, we would like to submit pointwise reply as below:

Sr. No	Query	Compliance
1	A representation has been received through email dated 31.07.2022 for rejection of the instant Environment Clearance application on the grounds that in the instant application several important facts are concealed. Further, the company has started construction work prior to EC. The EAC is of the opinion that the project proponent shall submit the pointwise clarification on the issues raised in the representation dated 31.07.2022. The EAC advised the Ministry to forward the representation dated 31.07.2022 to project proponent for their clarification	The unit has shown green field project in EIA report considering the fact while applying for TOR there was no construction activity was going on. Later the unit has obtained consent to establish (CTE) from Gujarat Pollution Control Board (GPCB) to set up an industrial plant at Survey No. 653, 655 Welspun city, Kutch under section 25 of Water Act- 1914 and Section 21 of Air Act 1981.  CTE-113913 issued vide letter No. GPCB/CCA-KUTCH-1832/ID-82601/597345 dated 07.08.2021 for setting up of 4,00,000 TPA TMT Bar. CTE Copy is enclosed here as <b>Annexure-I</b>
2.	On examination, the EAC observed that some ground work or preparation activity has been started though the project is greenfield, as reported in the Report. Also, EDS was raised by the Ministry regarding the same and Project Proponent submitted that the unit has obtained CTE from SPCB for	The unit has proposed to purchase hot billet (raw material) from adjoining M/s Welspun Steel limited. Accordingly, they have started construction activities and site and obtained the provisional CCA from GPCB vide consent order No. WH- 120111 issued vide letter no. GPCB/CCA-KUTCH-1832/ID-82601/679643 dated 02/08/2022. CCA Copy is attached here as <b>Annexure-II</b> .  For Hot rolling mill, EC is not applicable under EIA

Sr. No	Query	Compliance
	<p>manufacturing of TMT Bars via letter dated 07.08.2021. Accordingly, construction work has been done to manufacture TMT bars. Project proponent is required to submit the details of the construction work undertaken so far and clarify why EC is not applicable under EIA Notification, 2006 for carrying out such work? Further, EAC is of the view that factual report may be sought from IRO, MoEF&amp;CC in this regard.</p>	<p>Notification, 2006. Notarized Undertaking for the same is enclosed here as <b>Annexure-III</b></p> <p>Further representative from IRO had visited the site and submitted factual report from IRO, MoEF&amp;CC in this regard is attached here as <b>Annexure-IV</b>.</p> <p>Now with IRO report and revised Executive summary and Chapter 2 of EIA report, we are hereby submitting the reply to Ind 1 Committee for obtaining EC.</p>
3.	<p>The EAC noted that the Sang River is at a distance of 0.6 km from the project site. As per specific ToR condition (viii), PP is required to submit the authenticated HFL data of the Sang River from the concerned Competent Authority. However, the same has not been submitted.</p>	<p>The rain fall data of Kutch district shows very less rain fall and for the last 100 years no flood was reported at this region. The authenticated HFL data of the Sang River is attached here as <b>Annexure-V</b></p>
4.	<p>On perusal of PH proceedings, EAC observed that 212 people attended the PH, objections were raised against the project, however, only few people signed the attendance. EAC is of the view when People have concern then they should also need to sign in the attendance sheet</p>	<p>Please note that all attendees were signed the document and copy of the same is attached here as <b>Annexure-VI</b></p>
5.	<p>A list of nearby industries is to be submitted along-with cumulative impact assessment of the project site</p>	<p>Please find list of nearby industries (22 Nos.) along-with cumulative impact assessment of the project site is enclosed here as <b>Annexure-VII</b>.</p>
6.	<p>There are Schedule - I species reported in study area, namely Peacock or Indian peafowl and Eurasian Spoonbill. Specific wildlife Conservation plan has been prepared and submitted to Principal Chief Conservator of Forest (PCCF), Forest department of Kutchh for approval. The status of approval of conservation plan has to be submitted.</p>	<p>The unit has submitted the conservation plan to the competent authority. The acknowledgement copy for the same is enclosed here as <b>Annexure-VIII</b>. The conservation plan was principally accepted by DFO</p>
7.	<p>In ToR, Total water requirement is mentioned as 3646 m<sup>3</sup>/day. However, in the EC application total water requirement is estimated as 3861 m<sup>3</sup>/day. PP shall provide justification for the same with revised water balance diagram. Further, the water will be sourced from sister concern unit M/s. Welspun India Limited from its 30 MLD Sewage treatment plant after recycling &amp; reuse of municipal sewage generated from the nearby Municipalities. Agreement made in the</p>	<p>In ToR, Total water requirement is mentioned as 3646 m<sup>3</sup>/day. However, in the EC application total water requirement is estimated as 3861 m<sup>3</sup>/day. As per detailed study at the time of EIA report preparation and according to process technology we increased the water requirement by 215 KLD (3646 KLD to 3861 KLD). And we reduced our waste water generation by 699 KLD (1020 KLD to 321 KLD).</p> <p>Total raw water consumption in the proposed unit will be approximately 3,861.00 m<sup>3</sup>/day (3,761.00 m<sup>3</sup>/day Industrial + 100.00 m<sup>3</sup>/day Domestic). Entire water will be sourced from sister concern unit, M/s. Welspun India Limited from its 30 MLD Sewage treatment</p>

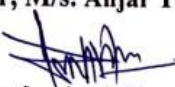
Sr. No	Query	Compliance
	regard shall also be submitted.	plant where recycling & reuse of municipal sewage generated from the nearby Municipalities takes place.  Revised water consumption & waste water generation details are enclosed here as <b>Annexure-IX</b>  MOU with M/s. Welspun India Limited is attached here as <b>Annexure-X</b>
8.	GLC modelling details for CO shall be submitted.	GLC modeling details for CO is attached here as <b>Annexure-XI</b>
9.	Baseline data related to surface water and ground water shall be revisited and specific value range shall be submitted.	Revised Baseline data related to surface water and ground water is attached here as <b>Annexure-XII</b>
10.	Noise levels in the baseline data shows higher values. Project proponent shall submit the justification along with the mitigation measures that will be undertaken to minimize the impact.	In baseline data only one place, maximum noise level is higher than the permissible limit but Leq value is lower than the permissible limit. We will take following mitigation measure to prevent Noise pollution <ul style="list-style-type: none"> <li>• The acoustic enclosure will be designed for minimum 25 dB(A) insertion loss for meeting the ambient noise standards, whichever is on the higher side.</li> <li>• Regular equipment maintenance and better work habits will be adopted. D.G. set is proposed to be housed in an inbuilt acoustic enclosure.</li> <li>• Noise levels generated will be maintained to comply with the Factories Act &amp; Rules and will not exceed 75 dB (A) at 1 m distance.</li> <li>• Implementation of green belt within the premises of plant will absorb the noise. Thus, is being/ will help to control the noise pollution.</li> <li>• Proper lubrication and housekeeping will be usually done to avoid excessive noise generation.</li> <li>• Supervisor is will be responsible to control the noise by maintaining conditions of machineries and silencers.</li> </ul> Providing PPE (Personal Protective Equipment) to the personnel who are exposed continuously to the high noise zone/ operation area.

Further, as per committee's recommendation, we have revised chapter 2 of the EIA report and uploading along with ADS reply for your kind review at approval

In light of above facts, we request your kind self to consider our case and request to grant us EC at the earliest.

Thanking you,  
Yours faithfully,

**For, M/s. Anjar TMT Steel Private Limited.**

  
(Authorized Signatory)



# GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar-382 010

Phone : (079) 23226295

Fax : (079) 23232156

Website : www.gpcb.gov.in

BY R.P.A.D.

**"Consent to Establish"**

**(CTE- 113913)**

NO: GPCB/CCA-KUTCH-1832/ID- 82601 /

Date:

To,

✓ M/s. Anjar TMT Steel Pvt. Ltd.,

Survey no. 653, 655,

Welspun City, Vill: Versamedi,

Tal: Anjar,

Dist: Kutch – 370 110

Sub: Consent to Establish (NOC)-Amendment under Section 25 of Water Act 1974 and Section 21 of Air Act 1981

Ref: Your application for CTE Inward no. **195823** received dated **20/05/2021**.

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants **Consent to Establish to set up an industrial plant at Survey no. 653, 655, Welspun City, Vill: Versamedi, Tal: Anjar, Dist: Kutch.**

1. The validity of this order will be up to **19/05/2028**.
2. The list of the products to be manufacture is as below:

Sr. no.	Product	Quantity
1	TMT Bars	4,00,000 TPA

**SUBJECT TO THE FOLLOWING CONDITIONS:**

1. Industry shall not carry out any activities which attract provision of EIA notification 2016 and amendment made therein.
2. Industry shall not install reheating furnace, rolling mill or any other furnace which are covered under EIA notification 2006 & amendment made therein.
3. Industry shall use only hot billets as raw material.
4. Unit shall purchase hot billets (raw material) from adjoining M/s. Welspun Steel Ltd (ID-18109) as per your undertaking dated 03/06/2021.
5. Unit shall strictly adhere to MoU made between M/s. Welspun Steel Ltd & M/s Anjar TMT Steel Pvt. Ltd. regarding supply of hot billets as per raw material.
6. Industry shall strictly adhere to undertaking dated 03/06/2021 that project doesn't involve in hot- cold rolling, rerolling or any other activity as specified in Ministry of Environment, Forest and Climate Change letter dated 22/10/2020, ref no. F. No. IA-Je/1013/8/2019-IA-II (I).
7. No ground water shall be withdrawal without prior permission from CGWA as per Hon'ble NGT order.
8. Industry shall obtain Public Liability Insurance Policy as per PLI Act & submit a copy of the same to this office, if applicable.

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### 3. CONDITIONS UNDER WATER ACT 1974:

- 3.1 Source of Water:- Weispun India Ltd. (ID-18108)
- 3.2 The quantity of the fresh water consumption for industrial (cooling) purpose shall not exceed 24,000 KLD.
- 3.3 The quantity of the fresh water consumption for domestic purpose shall not exceed 5 KL/Day.
- 3.4 There shall be no discharge of industrial waste water, cooling water shall be recirculated within the system.
- 3.5 The quantity of domestic waste water (Sewage) shall not exceed 4 KL/Day.
- 3.6 Domestic effluent shall be conveyed to ETP of M/s. Weispun India Ltd. for further treatment & disposal.
- 3.7 Industry shall convey domestic effluent through tanker and maintain its record.
- 3.8 Disposal system for storm water shall be provided separately, in no circumstances storm water shall be mixed with the Industrial effluent.

### 4. CONDITIONS UNDER AIR ACT 1981:

- 4.1 There shall be no use of fuel, hence there shall be no flue gas emission from manufacturing process and other ancillary operation.
- 4.2 There shall be no process gas emission from manufacturing process and other ancillary operations.
- 4.3 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder as per National Ambient Air Quality Standards issued by MoEF & CC dated 15<sup>th</sup> November-2009.

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air in ug/m <sup>3</sup>
1.	Sulphur Dioxide (SO <sub>2</sub> )	Annual	50
		24 Hours	80
2.	Nitrogen Dioxide (NO <sub>2</sub> )	Annual	40
		24 Hours	80
3.	Particulate Matter (Size less than 10 µm) or PM <sub>10</sub>	Annual	60
		24 Hours	100
4.	Particulate Matter (Size less than 2.5 µm) or PM <sub>2.5</sub>	Annual	40
		24 Hours	60

- 4.4 The level of Noise in ambient air within the premises of industrial unit shall not exceed following levels:

Between 6 am to 10 pm: 75 dB (A)

Between 10 pm to 6 am: 70 dB (A)

Outward No:597347123057



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PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar-382 010

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## **5. CONDITIONS UNDER HAZARDOUS WASTE RULES:**

- 5.1 The applicant shall have to comply with provisions of Hazardous and other Waste (Management and Trans Boundary Movement) Rules 2016.
- 5.2 The applicant shall obtain membership of common TSDF site for disposal of Hazardous waste as categorized in Hazardous and other Waste (Management and Trans Boundary Movement) Rules 2016.
- 5.3 The applicant shall obtain membership of common Hazardous Waste incinerator for disposal of incinerable waste.
- 5.4 The applicant shall provide temporary storage facilities for each type of Hazardous Waste as per Hazardous and other Waste (Management and Trans Boundary Movement) Rules 2016.
- 5.5 The applicant shall obtain registration/authorization for recycling/reprocessing any hazardous waste before procuring material/starting production as per HW Rules 2016.
- 5.6 The applicant shall obtain authorization for recovery/reuses of any hazardous waste material as per HW Rules 2016.

## **6. GENERAL CONDITIONS**

- 6.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
- 6.2 The waste generator shall be totally responsible for (i.e. Collection, storage, transportation and ultimate disposal) of the wastes generated.
- 6.3 Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form – 4 by 31st January of every year.
- 6.4 In case of any accident, details of the same shall be submitted in Form – 5 to Gujarat Pollution Control Board.
- 6.5 Applicant shall comply relevant provision of "Public Liability Insurance Act-91".
- 6.6 Unit shall take all concrete measures to show tangible results in waste generation reduction, avoidance, reuse and recycle. Action taken in this regards shall be submitted within 03 months and also along with Form 4.
- 6.7 Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous waste generated within the factory premises.
- 6.8 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 10 meters width shall be developed.

For and on behalf of  
Gujarat Pollution Control Board

  
(In-charge Unit Head, (Kutch East)  
DEE, Head office

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# GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar-382 010

Phone : (079) 23226295

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By R.P.A.D

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Transboundary) Rules, 2016 framed under the Environmental (Protection) Act-1986. This Board is empowered to Grant CC&A.

And whereas Board has received consolidated consent application inward no. **258204** dated **02/07/2022** for the **Consolidated Consent and Authorization (CC & A)** of this Board under the provisions / rules of the aforesaid Acts. Consents & Authorization are hereby granted as under:

### CONSENTS AND AUTHORISATION:

(Under the provisions /rules of the aforesaid environmental acts)

To,  
M/s. Anjar TMT Steel Pvt. Ltd.,  
Survey no. 655 & 653,  
Vill: Varsamedi, Welspun City,  
Tal: Anjar,  
Dist: Kutch - 370 110

1. **Consent Order No. WH-120111 Date of issue: 14/07/2022.**
2. The consents shall be valid upto **01/07/2027** for the use of outlet for the discharge of treated effluent and emission due to operation of industrial plant for manufacturing of the following items/ products:

Sr. No.	Product	Quantity
1	TMT Bars	4,00,000 TPA

### Subject to specific condition:

1. Industry shall not carry out any activities which attract provision of EIA Notification-2006 and amendment made therein.
2. Industry shall not install reheating furnace, Hot/ cold rolling mill, re-rolling mill and activities or any other furnace which are covered under EIA notification-2006 and amendment made therein as per Hon'ble NGT order issued in case of M/s. Chromini Steel (P) Ltd.
3. Industry shall use only hot billets as raw material.
4. Industry shall strictly adhere to undertaking dated 03/06/2021 that project doesn't involve in hot & cold rolling, rerolling or any other activity as specified in Ministry of Environment, Forests and Climate Change letter no. F. no. IA-J-11013/8/2019-IA-II(I) dated 22/10/2020.
5. Industry shall obtain fresh water from valid source having permission of the competent authority.

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6. Industry shall not withdrawal ground water without prior NOC of CGWA as per order of Hon. National Green Tribunal.
7. Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).
8. Industry shall submit a copy of CCA obtained by M/s. Welspun India Limited (ID-18108) for reception, treatment & disposal of domestic sewage of your industrial plant within a month.
9. Industry shall renew Public Liability Insurance Policy time to time & submit a copy of the same to this office.

### **3. CONDITIONS UNDER THE WATER ACT:**

- 3.1 Water Source: - Welspun India Limited (ID-18108). Industry shall maintain complete record of the same.
- 3.2 The quantity of the fresh water consumption for industrial purpose shall not exceed 24000 KL/Day (make up water required for cooling: 480 KLD). Water mainly used for cooling only.
- 3.3 The quantity of the fresh water consumption for domestic purpose shall not exceed 5 KL/Day.
- 3.4 There shall be no discharge of industrial effluent. Effluent generated from cooling system shall be recirculated for the cooling.
- 3.5 The quantity of domestic waste water (sewage) shall not exceed 4 KL/Day.
- 3.6 Domestic effluent shall be conveyed to STP of M/s. Welspun India Limited, (ID-18108) Survey no. 675, Vill: Varsamedi, Tal: Anjar, Dist: Kutch for treatment & ultimate disposal.
- 3.7 Industry shall provide fix pipeline with flow meter for conveyance of domestic effluent to M/s. Welspun India Ltd (ID-18108).
- 3.8 In case of non compliance under Water Act-1974 by any of the units, both industries i.e. M/s. Anjar TMT Steel Pvt. Ltd., (ID-82601) & M/s. Welspun India Ltd (ID-18108) are jointly & severally responsible for action under Water Act-1974 & other Environmental Acts/ Rules.
- 3.9 Disposal system for storm water shall be provided separately. In no circumstances storm water shall be mixed with the industrial effluent.

### **4. CONDITIONS UNDER THE AIR ACT:**

- 4.1. There shall be no use of fuel hence there shall be no flue gas emission from manufacturing process and other ancillary operations.
- 4.2. There shall be no process gas emission from manufacturing process and other ancillary operations.
- 4.3. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.



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# GUJARAT POLLUTION CONTROL BOARD

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## 5. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

Form for grant of authorization for occupier or operator handling Hazardous waste

5.1 Authorization order No:-WH-120111 date of Issue: 14/07/2022.

5.2 M/s. Anjar TMT Steel Pvt. Ltd., is hereby granted an authorization based on the enclosed signed inspection report for generation, collection, treatment, storage, transport of hazardous waste on the premises situated at Survey no. 653 & 655, Welspun City, Tal: Anjar, Dist : Kutch.

Sr. No	Waste	Quantity per Annum	Schedule/ Category	Facility
1	Used Oil	15 KL	I-5.1	Collection, Storage, Transportation, Reuse within plant and selling out to registered recyclers.

• The list of solid waste are as below:

Sr. No	Waste	Quantity	Facility
1	Mill Scale	8400 TPA	Collection, Storage and dispatch to sinter plant or re circulated to steel making process of steel melt shop.
2	End cuts & cobble cuts	16800 TPA	Collection, Storage and dispose for re melting as steel scrap.

5.3 The authorization shall be valid upto 01/07/2027.

5.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

5.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.5.2 to the industry having valid CCA of this Board.

### 5.6 TERMS AND CONDITIONS OF AUTHORISATION

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible

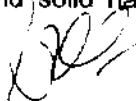
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- scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
  7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
  8. An application for the renewal of an authorization shall be made as laid down in rules 6(2) Under Hazardous and Other Waste Rules, 2016.
  9. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation
  10. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
  11. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
  12. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
  13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
  14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
  15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board, in Form-4 by 30<sup>th</sup> day of June of every year for the preceding period April to March.
  16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
  17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
  18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
  19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
  20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
  21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14<sup>th</sup> October, 2003.
  22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.



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# GUJARAT POLLUTION CONTROL BOARD

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## 6 SPECIFIC CONDITIONS:-

- 6.1 The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
- 6.2 Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
- 6.3 In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.
- 6.4 The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
- 6.5 Unit shall comply provisions of E-Waste Management Rules-2016.
- 6.6 The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
- 6.7 The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding **ninety days**. Prior permission of the Board shall be obtained for extension of the storage period.
- 6.8 The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
- 6.9 The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

## 7 GENERAL CONDITIONS: -

- 7.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
- 7.2 Applicant shall also comply with the general conditions given in annexure I.
- 7.3 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.
- 7.4 In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.
- 7.5 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.
- 7.6 The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.
- 7.7 The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.
- 7.8 In case of change of ownership/management the name and address of the new owners/ partners/directors/proprietor should immediately be intimated to the Board.

Page 5 of 6

*Clean Gujarat Green Gujarat*

ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

Outward No: 678/2018

7.9 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 357 of 1995 dated 14<sup>th</sup> October 2003.

For and on behalf of  
GUJARAT POLLUTION CONTROL BOARD



(Smt. U.K. Upadhyay)  
Senior Environment Engineer  
Date:-

NO: GPCB/CCA-Kutch-1832/ID-82601/

Issued to:

M/s. Anjar TMT Steel Pvt. Ltd.,  
Survey no. 655 & 653,  
Vill: Varsamedi, Welspun City,  
Tal: Anjar, Dist: Kutch - 370 110.

Copy to:

M/s. Welspun India Limited, (ID-18108)  
Survey no. 675,  
Vill: Varsamedi,  
Tal: Anjar,

Dist: Kutch - 370 110...Industry shall maintain complete records of quantity of domestic effluent reception from **M/s. Anjar TMT Steel Pvt. Ltd.** including nos. of vehicle on daily basis & make available at site for inspection. **M/s. Welspun India Limited, (ID-18108) & M/s. Anjar TMT Steel Pvt. Ltd. (ID-82601)** both are jointly & severally liable for violation under Water Act & Environmental Acts/ rules.

Outward No: 679643, 02/08/2022

INDIA NON JUDICIAL  
Government of Gujarat

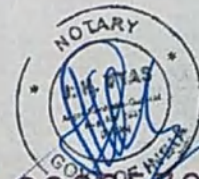


सत्यमेव जयते

Certificate of Stamp Duty

Rs.  
100

Certificate No. : IN-GJ48902453936925T  
 Certificate Issued Date : 14-May-2021 04:16 PM  
 Account Reference : IMPACC (AC)/ gj13209211/ ANJAR/ GJ-BJ  
 Unique Doc. Reference : SUBIN-GJGJ1320921133676331292979T  
 Purchased by : D R ZALA  
 Description of Document : Article 14 Bond  
 Description : NA  
 Consideration Price (Rs.) : 0  
 (Zero)  
 First Party : ANJAR TMT STEEL PRIVATE LTD  
 Second Party : Not Applicable  
 Stamp Duty Paid By : ANJAR TMT STEEL PRIVATE LTD  
 Stamp Duty Amount(Rs.) : 100  
 (One Hundred only)



KC 0000578882

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at [www.stockholding.com](http://www.stockholding.com) or using the Stock Holding Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website, Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

J. H. VYAS  
NOTARY

UNDERTAKING

I Mr. Girish kumar Mathur Authorized Signatory of M/s. Anjar TMT Steel Private Limited an Indian citizen, occupation: Service, Address: Welspun City, Village: Varsamedi, Ta: Anjar Dist: Kutch. hereby undertake that:-

- (1) M/s. Anjar TMT Steel Private Limited located at survey No. 652/1 (Amended survey number of 652/1, 653 & 655), Village -Varsamedi, Taluka: Anjar, Dist- Kutch Gujarat-370110
- (2) Our unit doesn't fall under EIA Notification dated 14<sup>th</sup> September, 2006.

What is stated here in above is true to the best of my knowledge and same I believe.

Date: 14/05/2021

Place: Anjar

For, M/s. Anjar TMT Steel Private Limited

Authorized Signature



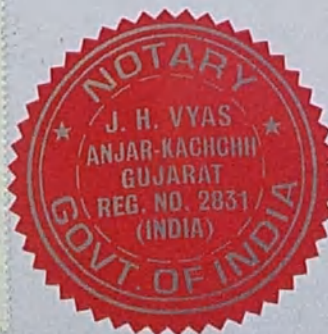
Sworn Signed before me

J. H. VYAS (NOTARY)

Ta. Anjar - Kutch - Gujarat

Sr. No. 693/2021

Date :- 14<sup>th</sup> MAY 2021



Handwritten signature of the notary, J. H. Vyas.

J. H. VYAS (NOTARY)

Ta. Anjar - Kutch - Gujarat

Sr. No. 693/2021

Date :- 14<sup>th</sup> MAY 2021



भारत सरकार  
**GOVERNMENT OF INDIA**  
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
**MINISTRY OF ENVIRONMENT, FOREST & CLIMATE  
 CHANGE**  
 एकीकृत क्षेत्रीय कार्यालय, गांधीनगर / **Integrated Regional Office,**  
**Gandhinagar**



ए 407 , 409 "अरण्य भवन ", सीएच-3 सर्कल के पास, सेक्टर-10 ए, गांधीनगर-382010/ A-407& A-409,  
 "ARANYA BHAWAN" Near CH-3 Circle, Sector-10A, Gandhinagar-382010  
 दूरभाष/Tel No: +9179-23255067 Email: iro.gandhingr-mefcc@gov.in

Dated:27<sup>th</sup> October, 2022

To  
 The Additional Director/ Scientist 'E'  
 Monitoring Cell  
 Ministry of Environment, Forest and Climate change,  
 Indira Paryavaran Bhawan, Jorbagh Road, Aliganj,  
 New Delhi-110003

**Subject: Factual Report of proposed metallurgical unit Steel TMT Rebars and Wire Rods manufacturing rolling mill, DRI Manufacturing plant along with Captive Power Plant of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler facility, located at Survey. No. 652/P1; Welspun City, Village Varsamedi, Tal Anjar Dist.: Kutch, Gujarat by M/s. Anjar TMT Steel Private Limited-reg.**

*Ref: Proposal no. IA/GJ/IND/2 21430/2021 dated 5th July 2022.*

Madam/Sir,

With reference to the cited subject, it is brought to your kind notice that the aforesaid project was inspected on 7<sup>th</sup> September 2022 by the undersigned for the purpose of issuing factual report for agenda no 10.3 sought by 10<sup>th</sup> EAC meeting held on 1<sup>st</sup> August 2022.

2. Accordingly, the factual report (copy enclosed) is being attached herewith for perusal and further appropriate action.

*Encl: As above*

Yours Sincerely

(Dr. Yogesh Kumar)  
 Deputy Director (S)/Scientist- 'C'  
 IRO Gandhinagar, MoEFCC

Copy to: -

1. The Member Secretary, Expert Appraisal Committee (Industry I), Indira Paryavaran Bhawan, Jor Bagh, New Delhi.
2. The Director, M/s. Anjar TMT Steel Private Limited at Survey. No. 652/P1; Welspun City, Village Varsamedi, Tal Anjar Dist.: Kutch, Gujarat (anjartmtsteel@gmail.com).

**Factual Report of proposed metallurgical unit Steel TMT Rebars and Wire Rods manufacturing rolling mill, DRI Manufacturing plant along with Captive Power Plant of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler facility, located at Survey No. 652/P1; Welspun City, Village Varsamedi, Tal Anjar Dist.: Kutch, Gujarat by M/s. Anjar TMT Steel Private Limited.**

M/s. Anjar TMT Steel Pvt. Ltd has made an online application vide proposal no. IA/GJ/IND/21430/2021 dated 5<sup>th</sup> July 2022 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006.

The site was inspected on 7<sup>th</sup> September 2022 to verify the present-day scenario of the construction activity/infrastructure development as directed by the Expert Appraisal Committee, Industry-I Sector in the meeting held on 1<sup>st</sup> August 2022.

The unit was not in operation; however, the construction and installation of instruments were going on at the time of inspection in 20250 m<sup>2</sup> (270m \* 75m) i.e. in Plot No 1, adjacent to WSL plant for which CTE and provisional CCA has already been obtained from concerned authority.

The unit has obtained consent to establish (CTE) from Gujarat Pollution Control Board (GPCB) to set up an industrial plant at Survey No. 653, 655 Welspun city, Kutch under section 25 of Water Act- 1974 and Section 21 of Air Act 1981 vide letter No GPCB/CCA-KUTCH-1832/ID-82601 dated 07.08.2021 for setting up of 4,00,000 TPA TMT Bar. The unit has proposed to purchase hot billet (raw material) from adjoining M/s Welspun Steel limited. The unit has further obtained the provisional CCA from GPCB vide consent order No. WH-120111. As per the available google earth images, it can be construed that no activity has been carried out by the project proponent before valid consent (refer plate 1 and 2 ).

Ministry's notification No. S.O.3250(E), dated the 20th July, 2022 directs all the standalone re-rolling units or cold rolling units, which are in existence and in operation as on the date of this notification, with valid Consent to Establish (CTE) and Consent to Operate (CTO) from the concerned State Pollution Control Board, as the case may be, shall apply online for grant of Terms of Reference (ToR) followed by Environment Clearance and the said units shall be granted Standard Terms of Reference as per item 3(a) of the said notification and shall be exempted from the requirement of public consultation provided that the application for grant of ToR shall be made within a period of one year.

As the unit has planned for setting up of new metallurgical unit, the unit has proposed a consolidated ToR followed by Environment Clearance for regularisation of Rolling mills having valid consent as per the above direction issued by the Ministry along with infrastructure which requires EC.

In the remaining area i.e. 59262 m<sup>2</sup> no construction or excavation activity has been carried out by the project proponent with respect of DRI (Sponge Iron), WHRB and Turbine which attracts the provisions of Environment Clearance.

Further, it is directed to submit the revised land use plan for setting up of infrastructure excluding the area (20250 m<sup>2</sup> ) already developed as per CTE and provisional CCA. The unit should submit green belt development plan for the whole area. Some prominent and mature trees were found in the proposed area. The mature trees at the proposed site should not be felled unnecessarily for future expansion.

Plate-1

Google earth image for the month of March 2021 (highlighted on top left corner).

No construction or excavation has been carried out by the project proponent.



Plate-2

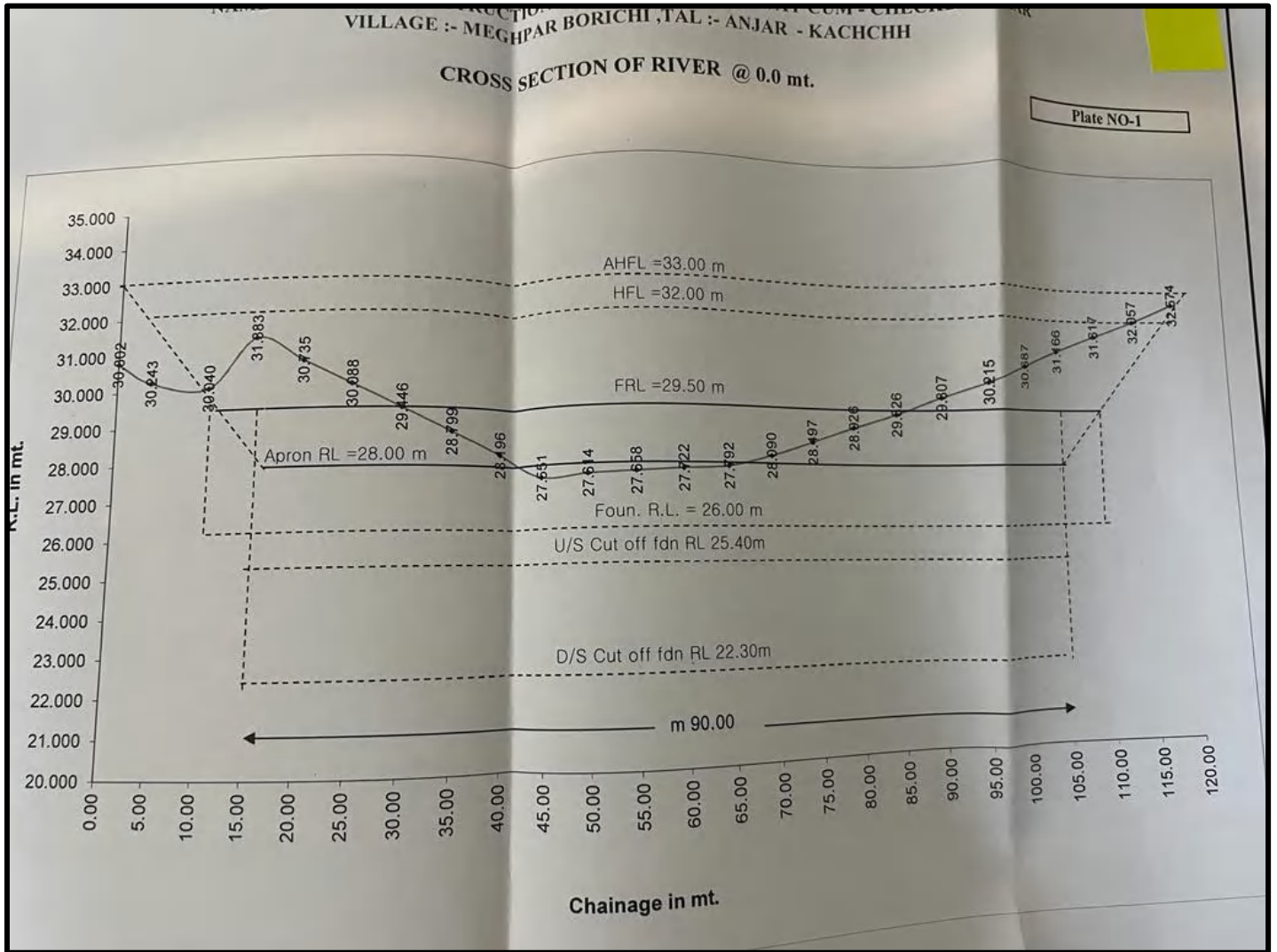
Google earth image for the month of January 2022 (highlighted on top left corner).

Construction can be seen as per CTE letter No GPCB/CCA-KUTCH-1832/ID-82601 dated 07.08.2021



# Annexure V

## The authenticated HFL data of the Sang River



A Statement showing participants present during the Public Hearing

As per the Ministry of Environment, Forest & Climate Change, Government of India, New Delhi vide its Notification no. S.O. 1533 dated Sept 14th, 2006 as amended till date; Public hearing has been fixed for M/s. Anjar TMT Steel Private Limited for Proposed Steel manufacturing unit Comprising of TMT Bars + Wire Rod - 4,50,000 TPA, 500 TPD DRI kiln along with Captive Power Plant consisting of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler Facility, at Survey No. 652/P-1, Welspun City, Village. Varsamedi, Ta. Anjar, Dist. Kutch, covered under category "A" as mentioned in their request application.

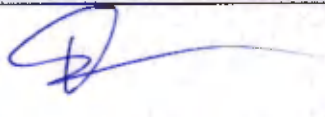
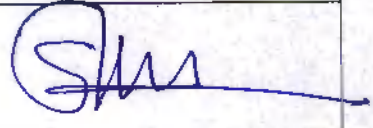
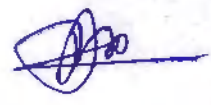

The statement showing participants present during the Public Hearing held on 08/03/2022, 11:00 hrs, at Survey No. 588, Varsamedi Sim, Kandla Airport Road, Vill. Varsamedi, Ta. Anjar, Dist. Kutch (Gujarat). is as under:

ભારત સરકારના વન પર્યાવરણ અને ક્લાઈમેટ ચેન્જ મંત્રાલય, નવી દિલ્હીના જાહેરનામા ક્રમાંક: એસ.ઓ. ૧૫૩૩ તા: ૧૪.૯.૨૦૦૬ તેમજ વખતોવખત થયેલ સુધારા અન્વયે જણાવવાનું કે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૬૫૨/પી-૧, વેલ્સપન સીટી, ગામ: વર્સામેડી, તા. અંજાર, જી. કચ્છ દ્વારા ટીએમટી બાર + વાયર રોડ - ૪,૫૦,૦૦૦ ટીપીએ, ૫૦૦ ટીપીડી ડીઆરઆઇ કીલન અને વેસ્ટ હીટ રીકવરી બોઇલર સુવિધામાંથી ૨૫ મેગાવોટ ટર્બાઇન અને ૫૦ ટીપીએચ સ્ટીમ ધરાવતા કેપ્ટિવ પાવર પ્લાન્ટ માટેની સૂચિત પરિયોજના (પ્રોજેક્ટ) કેટેગરી (એ) અંતર્ગત તેઓની અરજીના અનુસંધાને પર્યાવરણીય લોકસુનાવણી આયોજીત કરવામાં આવેલ છે.

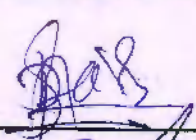
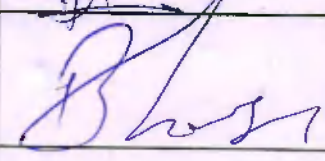

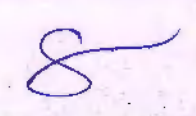
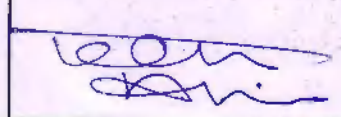
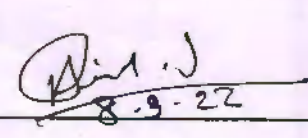
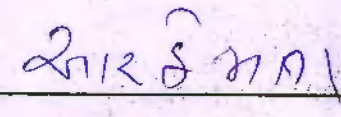
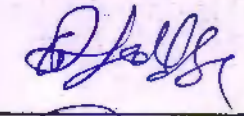
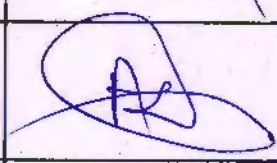

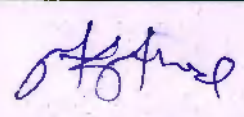

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
૧	WEO પર્યાવરણ અને ક્લાઈમેટ મંત્રાલય ડી. વે. મકવાલા દિલ્હી - ૬૨૬-૦૧૦૨	
૨	હાલોવારી મંત્ર, કચ્છ ગુલા કો.ની.ગી.મી. પુત્રા. ડી. ૬૬૬૨	
૩	મરડાવાર વોડ પેર	
૪	અમરતી સ.ન. કંદોઈ	
૫	મુખ્ય કિંધ	

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
6	વેલ્લ ડી. મેડરાણી	
7	કલ્પના પી ગાર	૧૨૫ ૭૦૨
8	ભાલા પત્રાલેખ પ્રમુખશ્રી અંજાર જગરપાલકી.	ભાલા પત્રાલેખ
9	મહેશ સિપાલાલ ડુંગરરામાલ ખાલીપરપડા અંજાર જગરપાલકી	
10	શ્રીમતી રશ્મિલ શાહજાન અંજાર	
11	રવિભાઈ	રવિભાઈ
12	અક્ષયભાઈ ઇતરાભાઈ રૂપા	અક્ષયભાઈ
13	નેતુભાઈ ડુંગરરામાલ ગરુવા	નેતુભાઈ
14	ડિગર ભાવના માટેલાભાઈ ભીનાર	ડિગરભાઈ
15	મત્ત્ય પ્રિયંકા સુનાઈલાઈ	
16	ગામી રમણલાલેભાઈ ભાટા	રમણલાલેભાઈ
17	manita Desai ગાયત્રી રાજનસીપ	manita

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
18	દિનેશ શામળ માતા ગામ : સગાવર	
19	ભાવિક અમરજી ખારડિયા ગામ : આંબાપા	
20	રબીબી જિના કાદસજીભાઈ ગામ વરસામેડી	
21	શાંતિ સિંઘ સામાલ	
22	દિનેશ શામળભાઈ માતા અપેક્ષેરૂડી રાજકોમલ મામાર	
23	અનિલ. જી. રાજપાટ આંબાપા : ૧૧૧. રાંધેર	
24	શારદા માતા આંબાપા	
25	વરુણ ગણેશ અપા	
26	અરવિંદરાજ કલ્યાણરાજ ગુડા વરસામેડી ભા. સીમર	
27	દેવિ માયા રામ વરસામેડી	
28	અમરજી કે. ખારડેકા આંબાપા તા. રાંધેર	
29	રૂબી બી. રાજા રાંધેર, ભા. સીમર	

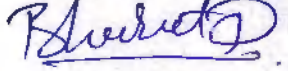
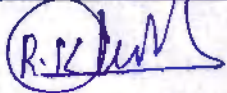
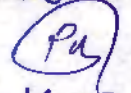
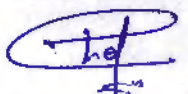

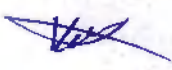
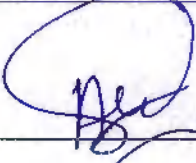

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
૩૦]	વિજય કાનજીભાઈ શંકર ગામ - શિલાગાય	V. Kanthubhai
(૩૧)	કિશોર ખીમજી વાળીયા શિલાગાય	Kishor-12
(૩૨)	Ambar Ambar D. R. Bhamhani	
૩૩	Anand Somaiya	
૩૪	Patan Vanshi	
૩૫	Hadiya Newid. M	
૩૬	Bhavik Retwal	
૩૭	Umed Mayatra	
૩૮	Vimal Vaghanshi	Nimale
૩૯	Subir	
૪૦	સામજી જેરાજી વાડા	ગણધાર
૪૧	કરજીભાઈ રાવણી	કરજીભ



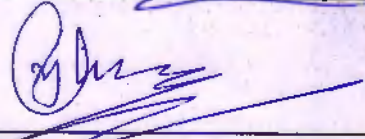
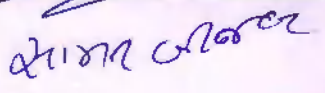
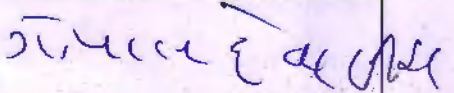
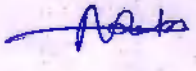
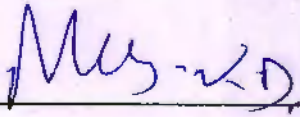
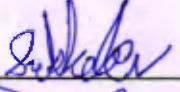
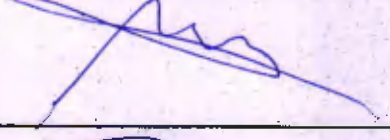
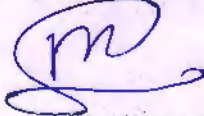
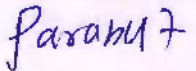
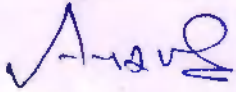
તારીખ 02/03/2022 ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
42	દીપાચ દ્વારા માલો (ગામ) આરાધસવારાધ	
43	Khyati D Barmodee (Adipur)	
44	Kochh Bhavner. RUPAREL (Kochh Jille mahily moarchey Kosh Dhay megreul garm Puncheyt Sadaisy)	
45	Ramila ben mukhane. (An)am karobam Setaisy	
46	Gusai Sonali samagar <sup>Bhimasar</sup>	Sonali
47	સાતાલોત મીમ મીમસર	સાતાલોત
48	Sabita Mishra.	
49	સુરમિ ગોસ્વામિ	સુરમિ
50	Gusai Nehal Bhimasar	
51	કોવાડયા નીતા ચાહર માડ	Nikita
52	Lalita Kailash das Gadhavi	
53	નગાલોત	નગાલોત


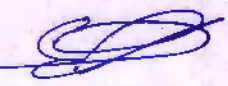


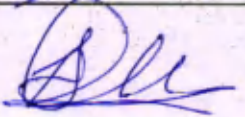
તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
54	ભરત દરમણી રુબાવતી	 99256 10100
55	બિજેશ સીમ ગોંડલાખા	Bimondaliya 98251 42501
58	શીખા ભાઈ કે. આદિર	 98792 58574
57	પરેશભાઈ આર. આદિર	 201622 7295
58	રવિ ભાઈ ભોળી	રવિ ભાઈ
59	ડાહ્યા સીમ સુચ પગલ રીડુ પલા સંગઠન અંજાર શહેર	 99210 38377
60	સામળ ભાઈ આદિર	સામળ
61	ભાસ્કરભાઈ સુવેદી મીરાજી	ભાસ્કરભાઈ સુવેદી
62	મયુરભાઈ સુવેદી ગાંધીધામ	
63	પરમ સંજય ભાઈ સંગર	
64	અરવિંદ સુવેદી મીરાજી ગાંધીધામ	
65	વાઘેલા આશિષભાઈ રાજેન્દ્ર સિંહ (મડાઈ)	

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
66	હારનાગી રાણા માતા. વિસરખેડ ભાખાખેડ. - અંજાર	
67	મુખત્યુ સિંઘ	
68	સોનૌશી ભાભાઈ દોંગા જોડાપાસવાડીયા - અંજાર	
69	સાહુર સાયબાબા મહાપાસવાડીયા	
70	ગોપાલ દેવ બી. મહાપાસવાડીયા	
71	આંબાભાઈ નાથાભાઈ રાણી	
72	(ભીમાસર) મેનજી વસાંતરાય સુખાર	
73	સિંગર સુખદેવ ગાભાભાઈ	
74	જી. સુખદેવ નાથાભાઈ	
75	મહેશ મનસુખ ભાભા	
76	પરભાઈ કરસન રાણી	
77	સાહુર દાનુભાઈ ખાસીયા ગામ:- આંબાખેડ તા. અંજાર	

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
78	અવધીરામ વા. ગામડોર	
79	ગાંધી જી ગોપાલભાઈ ગામડોર	ગાંધીજી
80	ગામડોર દાસરામ મગડા દાસરામ	
81	દાસરામ વા. ગામડોર ગામડોર	
82	સુવંશી વાસ્તવ વા. ગામડોર	સુવંશી
83	ભરણભાઈ દાસરામ વા. ગામડોર	ભરણ
84	પરશ્યામ ભિક્ષુ ભાટ્ટેજી વરસામેડી	P. S. Jhaveria
85	રાધા સુવંશી	RAU
86	રંગાચંદ્ર ભાટ્ટેજી	
87	રંગાચંદ્ર ગોપાલ	રંગાચંદ્ર
88	દિલાવર રંગાચંદ્ર ભાટ્ટેજી	
89	રાજેશ બાલુચાંદ ગામડોર	RAJESH BHADRA


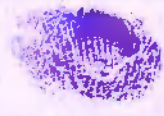
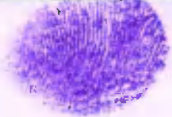

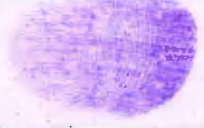
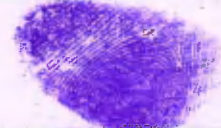
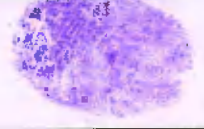
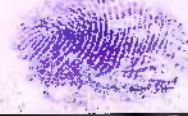
તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
90	મનજી ભોજાભાઈ વાઘી ૨ ગામ - ભીખાસર વાઘાસર તા. અંજાર	
91	રશીદાબાઈ રવભાઈ ગામ લાલાપર	રશીદા રવભાઈ
92	રશીદા રવ લાલાપર	રશીદા રવભાઈ
93	કાજલ પટેલ ગામ લાલાપર	કાજલ પટેલ
94	રશીદાબાઈ રવભાઈ	ક. રશીદા
95	S. D. Patel	
96	Narayan A. Chauhan - Arjant	
97	કાજલ જી માધવપર	કાજલ જી માધવપર
98	રશીદાબાઈ રવભાઈ	રશીદા
99	મનજી વાઘી ૨ 9913564800	
100		
101		

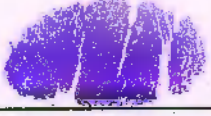

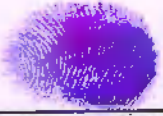


તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
102	વિજય માઈ	
103	શ્રી. શ્રી. ભારતીબેન	
104	પ્રિતીબેન	
105	ઉમાબેન	
106	રતીબેન કાનજી ચાણીર નાખાપર	
107	ફૈયલ સાધુ	
108	વસાબેન શામજીભાઈ ચાણીર નાખાપર	
109	રાજબેન જયશામભાઈ નાખાપર	
110	જીરાજીભાઈભાઈ શુભાઈ અવરવા	
111	ગોહિલ દયાબેન વસામભાઈ	
112	જૈત્રી	
113	યજ્ઞવલ્ક્યના ઝડેજા	





તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
114	લક્ષ્મીબેન લાખાપર	લક્ષ્મીબેન
115	કુંઘરીબેન રામભાઈ	કુંઘરીબેન
116	બાલુબેન લાખાપર	બાલુબેન
117	મોદીબેન સાકરા રવ્વારી	
118	મોદીબેન રૂપાભાઈ	
119	મોદીબેન ઘનાભાઈ શીર લાખાપર	
120	રાજુબેન વીજલભાઈ રવ્વારી લાખાપર	
121	રાજુબેન કાંગાભાઈ લાખાપર	
122	લાલાબેન વેશીભાઈ લાખાપર	
123	બાલુબેન વીરભાઈ લાખાપર	
124	મોદીબેન ઘનાભાઈ ચાહર લાખાપર	
125	રાધાબેન જલીજભાઈ ઉંદરીયા	રાધાબેન જલીજભાઈ

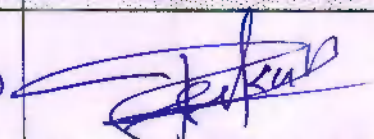
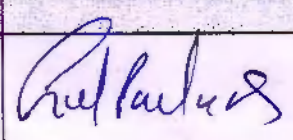
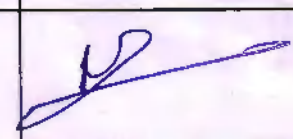
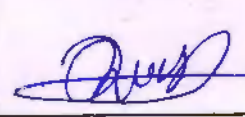

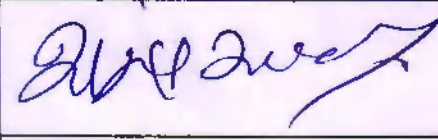
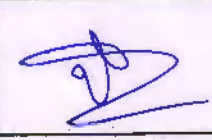
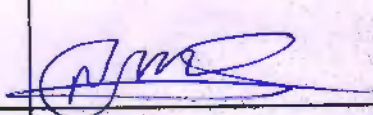
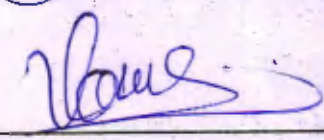
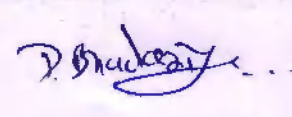
તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
126	Khulifur Muzama Latif Varsamedi	M. L. K
127	સહાબા ઉમરાન ફોણ	સહાબા ઉમરાન ફોણ
128	અધિકારી વાઈવણ જુસુબબાજ વરસામેડી	S. J. K
129	રામીબેન રવારી	
130	રામીબેન રવારી	
131	લખીબેન રવારી	લખીબેન રવારી
132	Afsinu Mahotani	Afsinu
133	Rabab, M. G	R. M. G
134	સહીબેન આરિર સતાપર	
135	રાહીબેન આરિર સતાપર	
136	રાહીબેન અરવડા સતાપર	
137	જીતાબેન રાજીશામતા - સતાપર	જીતાબેન

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાવેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
138	રૂપ કાંકર પુષ્પાસિંહ	રૂપ કાંકર
139	રાહીબેન ભરતભાઈ આહીર	
140	રાહીબેન હમીરભાઈ આહીર	
141	રૂહીબેન આબારભાઈ આહીર	
142	મવરુ વાંકર મેહતાવ સિંદ	મવરુ વાંકર
143	લાડુ બેન બાબુ ગામ ભાગાસર	લાડુ બેન
144	રૂહીબેન શામીભાઈ આહીર	
145	Swarnavata padminani	Swarnavata
146	ડાઈ બેન નારુગા મા માસર	ડાઈ બેન
147	રાધાબેન રવળ આગરોયા	રાધાબેન
148	અલીફા રૂક્સાર કુસબ	Ruksar J.
149	ગુલાબ ડોમલ દયાભાઈ	ડી.ડી. ગુલાબ

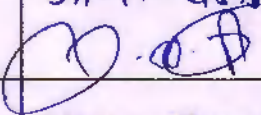
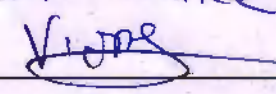
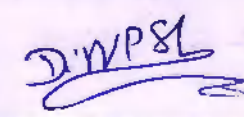
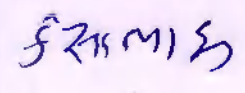
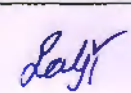
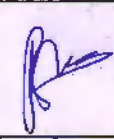
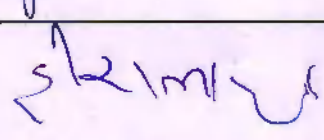
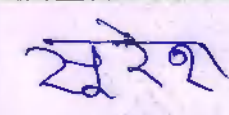
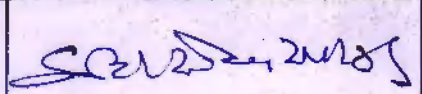
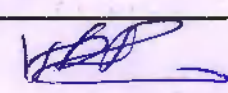
તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
150		
151	Nemi Chand.	
152	Rebani <del>Lakshmi</del> R	Rebani <del>Lakshmi</del> R
153	Ratnakumar Choudhary	Ratna
154	Gulip Singh	
155	રતનાકુમાર ચૌધરી વરસામેડી	Ratnakumar
156	વરસામેડી રા	
157	શિકરભાઈ	શિકરભાઈ
158		
159	Nitzal Singh.	
160	Vishnu A. Modi Prayavaran Vikas Foundation	
161	Prashant Patel Prayavaran Vikas Foundation	

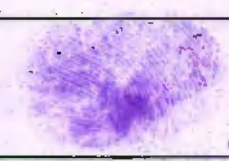
તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
162	B. C. Zuber Amjara	
163	ડો. રમેશ. ગ/કવી ગામ: ગોડાદર	
164	બાલુભાઈ રામ. ગોડાદર અંજાર	
165	મહેશ્વરી મહામદ	
166	જિણ્ણવરા દિલીપ રામ	
167	અમીનમમદ .જા.	
168	મહેશ્વરી કેશવજી	
169	માતાવિદ્યા	
170	માતા કિરણ . સેવન	
171	કાંબુ ભાગી સંગર	
172	રજારી બાબુ રાવ	
173	દિપ દમીરભાઈ વિરડા	

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
174	શ્રી ઘનનુભાઈ નારકુભાઈ ડુંભલ એરમેન શ્રી હરદી બિલ્લા પંચાયત - ચિમ્પાઈ	ગામ - પડાપગા 
175	શ્રી વિનય નારકુભાઈ વિરડા સભ્ય - ગળપાદર ગામ પંચાયત	ગામ - ગળપાદર 
176	શ્રી. શામનુભાઈ વિનસભાઈ વિરડા સદસ્ય - ગળપાદર ગામ પંચાયત	
177	શ્રી દિનેશ નારકુભાઈ વિરડા ગામ - ગળપાદર	
178	શ્રી કેશાભાઈ ભીલ સરપંચ - ગળપાદર ગામ પંચાયત	
179	શ્રી ભાનુભાઈ માનરભાઈ વિરડા ઉપ સરપંચ - ગળપાદર ગામ પંચાયત	
180	શ્રી દિલેશ ડુંભલ ગામ - પડાપગા	D. D. Hombhal
181	શ્રી ભાવેશભાઈ ક્યાભાઈ વિરડા પ્રમુખ - ગળપાદર ગોશાળા સમીતિ	
182	શ્રી. દિશાભાઈ પચાકાભાઈ વિરડા ગળપાદર	
183	શ્રી મુરશ મહેમીલાલ ગામ - ગળપાદર	
184	શ્રી દુરભાઈ નારકુભાઈ ગામ ગામ. ગળપાદર	
185	શ્રી દીનેશ પચાકા રાજેશ	

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમ્યાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
186	ચંદ્રેશ. આર. કુદરેભા	<u>ચં. આર. કુદરેભા</u>
187	ધરમશી દાવજ વણમરી	ધરમશી દાવજ
188	રવળ ભરુજી સિંગર	રવળ
189	ચંદ્રશેખર ભાવજ	<u>ચંદ્રશેખર</u>
190	પરસામી ભાઈ મળી. રાજીવી	પરસામી
191	ભાઈજી ભાઈજી સારીકીષ	<u>ભાઈજી</u>
192	ભાઈજી હીરા કુંવલ - ગામ - વરસામેડી	ભાઈજી હીરા કુંવલ
193	બાલભાઈ જેઠાભાઈ મહેડ - ગામ વરસામેડી	<u>બાલભાઈ</u>
194	દિપક વેલાભાઈ ભાઈજી વરસામેડી	P.V
195	દાશરથાઈ ભાઈજી મહેડ વરસામેડી	
196	જીપાભાઈ વણજી	જીપાભાઈ વણજી
197	દામજી જશી સીપા સીપા	દામજી

તારીખ ૦૮/૦૩/૨૦૨૨ ના રોજ સવારે ૧૧.૦૦ કલાકે મેસર્સ અંજાર ટીએમટી સ્ટીલ પ્રાઇવેટ લીમીટેડ, સર્વે નં. ૫૮૮, વરસામેડી સીમ, કંડલા એરપોર્ટ રોડ, ગામ. વરસામેડી, તા. અંજાર, જી. કચ્છ (ગુજરાત) ખાતે યોજાયેલ લોક સુનાવણી દરમિયાન હાજર રહેલા લોકોની યાદી નીચે મુજબ છે:

Sr. No. ક્રમાંક	Name & Address નામ અને સરનામું	Signature OR Thumb Impression સહી અથવા અંગૂઠાનું નિશાન
198	અમરાજી સિંહ સુખાણા બાંડળ	
199	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
200	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
201	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	R.T. Jethani
202	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
203	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
204	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
205	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
206	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
207	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
208	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	
209	સુભાષી સુભાષી સુભાષી સુભાષી સુભાષી	



## Annexure-VII

Anjar is a town, a tehsil and a municipality in Kutch district in the state of Gujarat, India. This town has strong trade and social links with neighbouring Adipur, Bhuj, Gandhidham and Kandla. It is a town of historic importance, located in Southern Kutch, around 40 km away from one of the biggest ports in India-Kandla Port. Due to the presence of the GIDC (Gujarat Industrial Development Corporation) estate, trade and commerce is highly developed in Anjar. It is a base for salt, timber and food industries and there is also tremendous growth in number of engineering workshops, fabrication industry, chemical industry, etc. The list of major industries within study area given in following table.

### List of Major Industries within Study Area (10 KMs RADIUS)

Sr. No.	Industry Name	Type	Distance and direction
1	Praj Industries Limited	One of leading suppliers of ethanol plant	9.0 km South-East
2	Ahir Salt Industries	Salt Manufacturer and Exporter of Various Grades of Salt	7.6 km South-East
3	Kutch Brine Chem Industries	Manufacturer, Exporter and Supplier of Refined Free Flow Iodized Salt and Industrial Salt	8.0 km South-East
4	Mehrawat industries	Manufacturer of plywood, Block board and flush door	7.0 km East
5	Plastofine Industries	Plastics Raw Materials & Plastic Articles Manufacturer	10.0 km North-East
6	Ashapura Timber Industries	Manufacturer of white coal, Briquette, Block board frames, etc.	8.0 km South-East
7	Vijay Steel Industries	Manufacturer and Service Provider of Timber Plywood, Commission Agent, Wood, Pine Wood, etc.	8.0 km East
8	Vrudhi Industries	Exporter, Manufacturer, Service Provider, Distributor, Supplier, Trading Company of Packaging of Finished Pellets, wooden pellets, etc.	7.0 km South-East
9	Mahalaxmi Warehouse and Allied Industries	Unit has businesses in the Warehouses on Hire, Saw Mills, etc.	7.0 km East
10	J k Industries	Manufacturer of Block Woods	8.0 km South-East
11	Raylinks Industries	Manufacturer and Supplier of Non-Woven Bags, Non-Woven Packaging Bags, Non-Woven Printed Bags, etc.	5.5 km North-West
12	Shree Shiv Industries	Manufacturer of tanker, dumper body & diesel dispenser	5.0 km North-West
13	Royal Foam Industries	Manufacturer of Sofas, Curtains & Mattress	5.5 km East
14	Diamond Thermopack Ind.	Manufacturer of the wide spectrum PP Filter Cartridge, RO Spun Filter, etc.	4.5 km North-West
15	Shreenathji Cotton Industries	Manufacturer of high-quality & quantity cotton and also engaged in cotton ginning and pressing industry	6.0 km North-West
16	Gokul Agro Resources Ltd.	Edible Oil Processing	3.0 Km South

Sr. No.	Industry Name	Type	Distance and direction
17	The industry is subsidiary of Welspun Steels Ltd. hence surrounded by other units of Welspun group and other industries	1. Welspun Steel Limited 2. Welspun Corp Limited (WCL-1, 2, 3, 4, 5) 3. Welspun India Limited 4. Welspun DI pipe 5. Welspun Metallics Limited 6. WASCO	

**Cumulative Impact Assessment from Construction Phase**

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
Transportation of construction material to site	Air Pollution (Dust)	Transportation of construction material in trucks	Direct Negative	Short Term	Reversible	Medium, Water sprinkling will be practiced to reduce fugitive dust emission
	Air Pollution (Gases)		Direct Negative	Short Term	Reversible	Medium, Periodical emission checks will be performed
	Noise Pollution	Noise generated from vehicles	Direct Negative	Short Term	Reversible	Insignificant, Periodical vehicle maintenance will be done
Construction activities / laying of roads	Air Pollution (Dust & Gases)	Operation of construction machineries, welding & others	Direct Negative	Short Term	Reversible	Insignificant, PPE will be provided to workers
	Noise Pollution	Generation from construction activities and use of earth moving machineries	Direct Negative	Short Term	Reversible	Insignificant, PPE will be provided to workers
	Land use	Storage of spares, Refractory and other construction material	Direct Negative	Short Term	Reversible	Storage is temporary and during construction period only
	Ecology	Loss of vegetation	Direct Negative	Short Term	Reversible	Insignificant, No cutting of trees. Green belt development will be started from construction period only.
Disposal of waste material	Air Pollution (Dust & Gases)	Due to movement of Vehicles	Direct Negative	Short Term	Reversible	Significant, PPE will be provided to workers and supervision will be done for its effective use by the workers.

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
	Noise Pollution	Due to loading/unloading	Direct Negative	Short Term	Reversible	Insignificant. Periodical vehicle maintenance and pollution check will be done. PPE will be provided to workers

### Cumulative Impact Assessment from Operation Phase

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
<b>Transportation of the coal &amp; other raw materials from the mines/suppliers to the project site</b>						
Handling & Transportation of Raw materials to project site	Air Pollution (Dust & Gases)	Dust emission from raw material transported in the trucks through road. Gaseous emission from the vehicular exhaust	Direct Negative	Short Term	Reversible	Insignificant <ul style="list-style-type: none"> <li>➤ Raw material will be covered with tarpaulin during transportation</li> <li>➤ Periodical vehicle maintenance and pollution check will be done</li> <li>➤ Water sprinkling will be done on kaccha road</li> <li>➤ Besides, the management will ensure proper usage of the personal protective equipment (dust mask, face cloth, etc) by the workers to avoid any exposure to dust</li> </ul>
	Noise Pollution	Noise generation while unloading of raw material and vehicular movement	Direct Negative	Short Term	Reversible	Insignificant <ul style="list-style-type: none"> <li>➤ The unloading will be done in covered shed from low height</li> <li>➤ Periodical vehicular maintenance will be done.</li> <li>➤ Proper usage of the Ear plug/muff provided to the employees working in that area will be ensured</li> <li>➤ Vehicles having valid PUC certificate will be given entry in the premises</li> </ul>

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
<b>Sponge Iron Plant – DRI Kilns</b>						
Crushing and Screening of Coal & Iron Ore	Air Pollution (Fugitive Dust Emission)	Crushing of iron ore and coal	Direct Negative	Short Term	Reversible	Insignificant ➤ Proper dust extraction system with Bag filter will be provided to control coal & iron ore dust emission
	Noise Pollution	Noise generation due to Crushing of iron ore and coal	Direct Negative	Short Term	Reversible	Insignificant ➤ Preventive maintenance and suitable mountings shall be used to ensure minimum noise. ➤ PPE shall also be provided to employees working in high noise area
Charging of Material in DRI Kiln	Air Pollution (Fugitive Emission)	Fugitive emission due to charging	Direct Negative	Short Term	Reversible	Insignificant ➤ Closed Conveyor will be installed to control dust emission during transportation of coal. ➤ Transfer points will be connected to Dust extraction system with Bag Filter
Operation of Rotary Kilns	Air Pollution (Dust & Gaseous emissions)	Generation of flue gas and fugitive emissions	Direct Negative	Long Term	Irreversible	Insignificant ➤ The gas from the Rotary Kilns will be taken to Dust Settling Chamber (DSC) and After Burning Chamber (ABC) and then to ESP before the cleaned gas is allowed to let out from Stack
	Solid Waste Generation	Generation of Dolochar	Direct Negative	Short Term	Reversible	Insignificant ➤ Dolochar generated will be made into briquette and reused in sinter plant of our sister concern unit
		Bag Filter Dust	Direct Negative	Long Term	Irreversible	Significant ➤ Will be sold to end users or given to nearby Sinter Plant

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
Cooling of Sponge Iron	Air pollution	Fugitive emission	Direct Negative	Short Term	Reversible	Insignificant ➤ Dust extraction system with Bag Filter will be installed
Screening and Storage of product	Air pollution	Fugitive emission	Direct Negative	Short Term	Reversible	Insignificant ➤ Dust extraction system with Bag Filter will be installed
Water Consumption	Resource Utilization	Consumption of water for cooling to meet evaporation loss	Direct Negative	Long Term	Irreversible	Significant ➤ Cooling water will be recycled after cooling in the cooling tower ➤ Make-up water will be required to meet evaporation loss
<b>Reheating Furnace</b>						
Charging of Material in Reheating Furnace	Air Pollution (Fugitive Emission)	Fugitive emission due to charging of materials	Direct Negative	Short Term	Reversible	Insignificant ➤ Bag Filter will be provided to control fugitive emissions during charging
Operation of Reheating Furnace	Air Pollution (Dust & Gaseous emissions)	Generation of flue gas and fugitive emissions during melting of sponge iron, scrap & pig iron	Direct Negative	Long Term	Irreversible	Significant ➤ Dust Extraction System with Bag Filter will be installed with the Reheating Furnace to keep particulate matter emissions from stack below 30mg/Nm <sup>3</sup> and to control the fugitive emissions
	Water Pollution	Backwash water from Softening Plant	Direct Negative	Short Term	Reversible	Insignificant ➤ Neutralization Pit will be installed to treat the waste water and shall be used for slag quenching

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
	Noise Pollution	Due to operation of Furnace	Direct Negative	Short Term	Reversible	Insignificant ➤ Management will ensure proper usage of the Ear plug/muff provided to the employees working in that area
	Solid waste generation	During liquid steel making process slag will be generated	Direct Negative	Long Term	Irreversible	Insignificant ➤ After metal recovery, remaining slag Will be used for road construction/ land filling/paver block/sent to brick/cement manufacturing unit.
		Dust from bag filter	Direct Negative	Long Term	Irreversible	Significant ➤ Will be collected periodically and sold to end users.
<b>Continuous Casting Machine</b>						
Casting Billets of	Resource Depletion (Water) & Water Pollution	Cooling of billets	Direct Negative	Long Term	Irreversible	Significant ➤ Water will be recycled back after cooling in Cooling Towers, for reuse. Only make-up water will be added thereafter. Cooling Tower Blow down will be used for dust suppression.
	Solid waste generation	Generation of Mill Scales	Direct Negative	Long Term	Irreversible	Significant ➤ Mill Scales will be removed time to time from the settling Pits provided. Scales collected will be sent to Sinter plant of sister concern unit or it may be re-circulated to the steel making process of Steel Melt Shop.
		Generation of End Cuts (scrap)	Direct Negative	Short Term	Reversible	Insignificant ➤ End cuts shall be collected and dispose for remelting as steel scrap

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
	Noise pollution	Caster rollers (rolling noise)	Direct Negative	Short Term	Reversible	Insignificant ➤ Ear plug/muff shall be provided to the employees working in that area
<b>Captive Power Plant</b>						
Coal Handling Area	Air Pollution (Dust Emission)	Fugitive dust emissions during crushing of coal	Direct Negative	Short Term	Reversible	Insignificant ➤ Bag filter system will be provided to control fugitive emissions in Raw Material/Coal Handling Area
	Noise Pollution	During crushing of coal for AFBC boiler	Direct Negative	Short Term	Reversible	Insignificant ➤ Ear plug/muff shall be provided to the employees working in that area
	Solid Waste generation	Generation of coal fines and dust	Direct Negative	Short Term	Reversible	Insignificant ➤ Will be reused in DRI Kiln
Operation of Waste Heat Recovery Boilers	Air Pollution (Gaseous Emissions)	Gaseous emission from the Off Gases coming from DRI Kilns	Direct Negative	Short Term	Reversible	Insignificant ➤ After utilizing the heat energy from the off gases coming from DRI Kiln, gases will be sent to ESP before letting out from stack
	Noise Pollution	CT Blow Down	Direct Negative	Short Term	Reversible	Insignificant ➤ Ear plug/muff shall be provided to the employees working in that area
TG Set	Noise Pollution	Turbine movement	Direct Negative	Short Term	Reversible	Insignificant ➤ Ear plug/muff shall be provided to the employees working in that area
<b>Domestic Waste</b>						
Operation of Domestic utilities	Water Pollution	Operation of washroom, toilets – wastewater generation	Direct Negative	Long Term	Reversible	Insignificant ➤ The sewage will be sent to WIL facility for treatment and reuse
<b>Green Belt Development</b>						

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
Development and maintenance of Greenbelt	Reduction in Air Pollution and Noise Pollution	Plantation of trees within premises to cover 33% of the area	Direct Positive	Long Term	Reversible	<ul style="list-style-type: none"> <li>➤ Positive Impact due to development of a proper greenbelt along the periphery of the premises. This will act as barrier for air emission and noise levels. Indigenous trees will be planted in three tire systems.</li> </ul>
<b>Socio-economic Development</b>						
Employment Generation	Socio-Economic Condition	Manpower for construction and operation will be sourced from nearby villages	Direct Positive	Long Term	Reversible	<ul style="list-style-type: none"> <li>➤ Positive Impact due to direct employment of persons from the nearby area.</li> </ul>
						<ul style="list-style-type: none"> <li>➤ Substantial benefits in the form of contracts to local agencies for different services.</li> </ul>
						<ul style="list-style-type: none"> <li>➤ Employment generation in transport sector for transportation of raw material and finished goods.</li> </ul>
<b>Ecology &amp; Biodiversity Development</b>						
Flora and Fauna	Air Pollution (Gaseous Emissions)	Reduce photosynthesis and decay of plants due to deposition of dust and particulate matter on the leaves	Direct Negative	Long Term	Reversible	<ul style="list-style-type: none"> <li>➤ Bag Filter, ESP, Dust Settling Chamber will be provided to control the flue gas emission</li> <li>➤ Water sprinkling must be done to control fugitive dust emission</li> <li>➤ Regular water sprinkling on the plants present in the vicinity of site area to be done to avoid deposition of dust on leaves.</li> <li>➤ Green Belt Development will be done around the periphery of the plant premises and its maintenance will be carried out</li> </ul>

Activity	Environmental Attributes	Cause	Impact Characteristics			
			Nature	Duration	Reversibility	Significance and Mitigative Measures
	Noise Pollution	Migration of fauna due to disturbance due to noise in the area	Direct Negative	Long Term	Reversible	➤ Encoustic enclosures will be provided to high noise generating equipments

ANJAR TMT STEEL PRIVATE LIMITED

Anjar,  
Date: 15/06/2022

To  
The Deputy Conservator of Forest,  
Kutch East Division,  
B/H DIC office, Near Mom's school,  
Bhuj, Kutch

**Subject: Submission of Wildlife Conservation Plan for proposed greenfield metallurgical unit – Steel Manufacturing unit comprising of TMT Bars + Wire Rod – 4,50,000 TPA, 500 TPD DRI kiln along with Captive Power Plant consisting of 25 MW Turbine and 50 TPH steam from Waste Heat Recovery Boiler facility located at Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka: Anjar, District: Kutch, Gujarat, India by M/s. Anjar TMT Steel Private Limited**

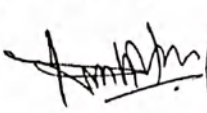

Dear Sir,

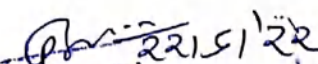
While submitting our application for obtaining Environment Clearance, the Ministry of Environment, Forest & Climate Change asked us to submit approved wildlife conservation plan for our project. Accordingly, we have prepared the Wildlife conservation Plan and we are submitting it for your kind approval.

We hope you will find the same in order and request your kind self to approve the same at the earliest.

Thanking you,  
Yours faithfully,

For, M/s. Anjar TMT Steel Private Limited

  
(Authorized Signatory) 

  
रवानगी कारकुन  
नायब वन संरक्षत्रीनी कार्यालय  
पूर्व वन विभाग, होस्पिटल रोड,  
बुज - कच्छ. ३७०००१.

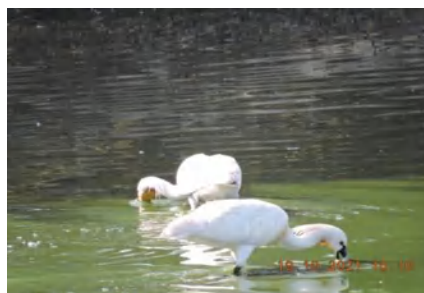
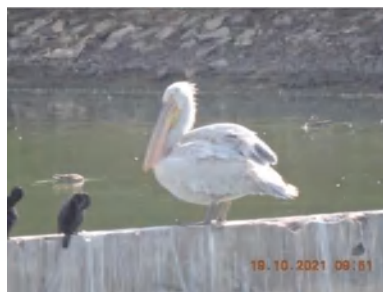
**Wild Life Conservation Plan for Schedule –I Fauna as per Wild Life Protection Act (1972) along with Budgetary Allocation**

**for**

**M/s. Anjar TMT Steel Private Limited**

**at**

**Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka:  
Anjar, District Kutch, Gujarat, India**



**Prepared by:  
Shree Green Consultants, Surat, Gujarat**

<b>Company Name</b>	:	M/S. Anjar TMT Steel Private Limited,
<b>Site Location</b>	:	Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka: Anjar, District Kutch, Gujarat, India
<b>Report Type</b>	:	Wild Life Conservation Plan for Schedule –I Fauna as per Wild Life Protection Act (1972) along with Budgetary Allocation
<b>Consultant</b>	:	M/s. Shree Green Consultants, Surat
<b>Report No:</b>	:	SGC / 20220519/WLC_01



## **ACKNOWLEDGEMENT**

This Plan has been prepared by Ecology & Biodiversity Experts (EB Expert) based on survey and interaction held with villagers who lives near project site.

This plan aims to take control measures for Schedule-I Fauna and minimizing the threats posed by the project implementation.

Implementation of the Plan will reduce the threat posed to the wild animals of the area and will reduce man-wild animal conflict.

Our thanks are due to the official of M/s. Anjar TMT Steel Private Limited for providing relevant information for the plan.



### Survey Team

Shree Green Consultants have deputed professionally qualified, knowledgeable and experienced Team Members for Conducting Ecology & Biodiversity Survey and prepared a detailed Wild Life Conservation plan.



## CONTENTS

<b>Title</b>
Executive Summary
Introduction of the Project Site
Detailed Study Report of Project and Project Impact Area
IUCN Status
Conservation Measures
Yearly Fund allocation for Wildlife Conservation plan for Schedule –I fauna through Habitat Improvement and Awareness Programme
Source of Information



## Executive Summary

- Conservation Measures for Schedule-I Fauna as per Wild Life Protection Act (1972) is prepared in compliance to EIA/EMP report.
- This is the proposed green field project comprising of Steel TMT Rebars and Wire Rods manufacturing rolling mill having capacity of 4,50,000 TPA, DRI Manufacturing plant consisting of 500 TPD DRI kiln along with Captive Power Plant consisting of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler facility by M/s. Anjar TMT Steel Private Limited.
- The project site does not come under Forest Division. The location of the project area is as follows: Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka:, District:, Gujarat

State	Gujarat
District	Kutch
Tehsil	Anjar
Village	Varsamedi
Plot/Survey No.	Survey No. 652/P-1
Project Area	71592.00 Sq. meter
Co-ordinates	Latitude Longitude Lat.: 23°06'50.11"N, Log.: 70°05'5.17"E

- The summer begins in early March and lasts until June. April to June are the hottest months, the average maximum temperature being 40°C (104 °F).
- Monsoon begins in late May and the city receives about 550 millimetres (22 in) of rain by the end of October, with the average maximum being 35 °C (95 °F) during those months.
- October and November see the retreat of the monsoon and a return of high temperatures until late November. Winter starts in December and ends in late February, with average mean temperatures of around 14 °C (57 °F), and negligible rain.
- The project area does not come within any Wildlife Sanctuary and its Eco sensitive zone.
- Schedule-I fauna like Peacock or Indian peafowl (*Pavo cristatus*) and Eurasian Spoonbill (*Platalea leucorodia*) have been found in Project Area.

### **Peacock or Indian peafowl**

- No perceptible threats were identified in the villages surveyed. Village residents are against hunting or poaching of the peafowl, due to culture and mythology reasons. The only threat reported by the villagers is the stray dogs chasing these birds. Adult peafowl can usually escape ground predators by flying into trees.
- The management plan has proposed conservation measure and will try to minimize above threats.

**Eurasian Spoonbill (*Platalea leucorodia* )**

- This is a Palearctic species, breeding from the United Kingdom and Portugal in the west through to Japan, and also in North Africa. In Europe, only the Netherlands, Spain, Austria, Hungary and Greece have sizeable populations.
- Most birds migrate to the tropics in winter, with European breeders mainly going to Africa & India.
- Schedule-I fauna like Eurasian Spoonbill also have been found in this Project Area.
- Threats to the Eurasian spoonbill include habitat loss and degradation by drainage and pollution, it is especially adversely affected by the disappearance of reed swamps.



## Introduction of the Project Site

### Location of the Project:

The site is located at around distance of 5.0 km away from Anjar city in East direction. The nearest airport is situated at Kandla around 1.5 km in South-East direction from the project site.

- a) Location : Welspun City
- b) Plot/Survey No. : Survey No. 652/P-1
- c) Village : Varsamedi
- d) Tehsil/Taluka : Anjar
- e) District : Kutch
- f) State : Gujarat
- g) Co-ordinates (Center) : Lat.: 23° 6'50.11"N, Log.: 70° 5'5.17"E

### Detailed map of Kutch District Showing Project Location



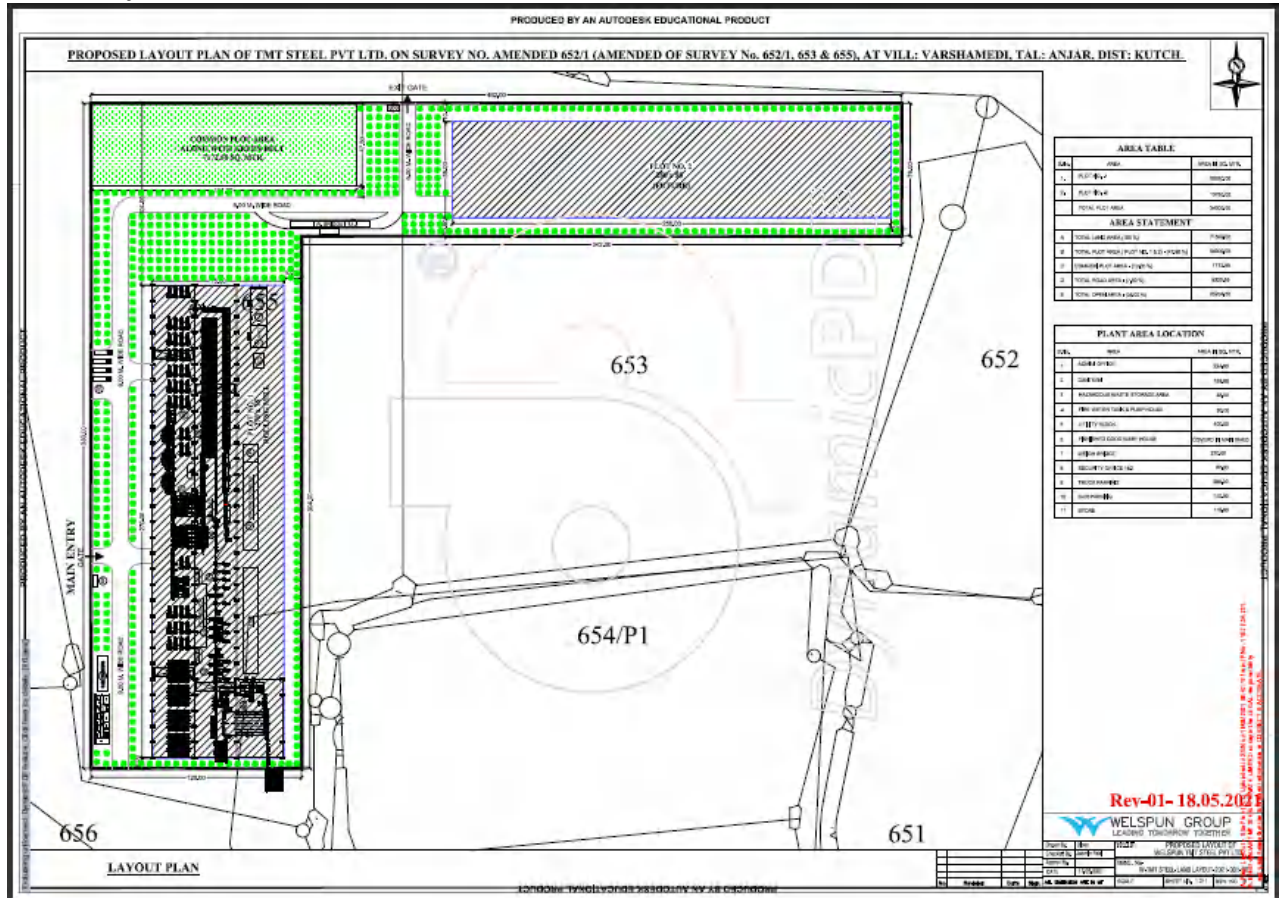
### Google Image of Project Site



### Photographs of Project Site



## Plant Layout



## Surrounding Salient Features and Environmental Setting

Sr. No.	Nearest Infrastructure Feature	Identity	Direction from Project Site
1	Nearest Village	Varsamedi	2.8 km in North-East direction
2	Nearest City/Town / Nearest Dist Headquarter	Anjar	5.0 km in West direction
3	Nearest National Highway	NH-341 NH-41	2.0 km in North direction 2.0 km in South direction
4	Nearest Railway Station	Adipur Anjar	4.0 km in South direction 5.0 km in West North West direction
5	Nearest Airport	Kandla	1.5 km in South-East direction
6	Nearest River /Water Body	Sang river	0.6 km in South direction
7	National Park / Reserve Forest, Biosphere Reserve	None	None within 10 km radius
8	Archeological site	None	None within 10 km radius
9	State boundary	None	None within 10 km radius
10	Defense installation	None	None within 10 km radius
11	Seismic Zone		Zone-V

## Villages Within the Project Area and Demographic Profile

Sr. No.	Location	Household	Population 2011	Population 2021
<b>Anjar Block</b>				
1	Varsamedi	2826	10654	14971
2	Meghpar Borichi	1093	5123	7199
3	Pashwadi Mitha	154	671	943
4	Pashwadi Khara	211	988	1388
5	Aiapar	216	1040	1461
6	Meghpar Kumbhardi	2799	12637	17757
7	Dhabda	631	2918	4100
8	Anjar	18906	87183	122506
9	Nagalpar Nani	216	1069	1502
10	Nagalpar Moti	1185	5421	7617
11	Satapar	441	1851	2601
12	Lakhapar	467	2086	2931
13	Bhimasar	1731	7074	9940
14	Modvadar	379	1552	2181
15	Vidi	661	3030	4258
16	Sinugra	694	3077	4324
17	Sapeda	565	2528	3552
18	Jaru	297	1374	1931
<b>Gandhidham Block</b>				
19	Galpadar	85	396	619
20	Antarjal	2426	11256	17581
21	Gandhidham	54565	252,100	406,268
22	Padana	378	1462	2284
23	Mithi Rohar	378	13712	21417
24	Kidana	378	15679	24489
25	Shinay	378	4345	6787
26	Chudwa	378	1734	2708

## The Land Use Pattern of Project Area:

Land use Class	Area in Ha	Area in %
Agriculture	12300.53	38.9
Industrial Area	3763.85	11.9
Mining Area	499.37	1.6
Mud	178.89	0.6
Resort/Garden/Park	208.56	0.7
Salt Pan	173.59	0.5
Settlement	4609.77	14.6
Scrubland	8260.75	26.2
Waterbody	1588.58	5.0
<b>TOTAL</b>	<b>31583.91</b>	<b>100</b>

### Detailed Study Report of Project and Project Impact Area

#### List of Experts involved in the study.

Shree Green Consultants Team took up the study along with the officials and staff of M/s Anjar TMT Steel Pvt Ltd.

#### Sites visited

The project area is in Village: Versamedi, Taluka: Anjar, District: Kutch, Gujarat. 10 km radius around the project site is considered for study.



#### Methodology and sampling procedure:

##### Study of Fauna

This plan is prepared for conservation and management of Schedule-I Bird species depending on site studies. It is therefore necessary to know the wildlife species present within the lease area as well as the impact area so as to design an appropriate plan.

### **Methodology:**

Direct sighting of wild animals is a rare chance. The study had to rely on indirect evidences, and information collected from the surrounding areas from various stake holders such as available records. Collection of information from such discussions yielded the desired result. Besides where ever animal signs available at the time of field study the same was taken in to consideration. The wildlife habitat has also been studied and analyzed for possible presence of the animals.

### **Habitats Description of the Study Area (10 Km)**

The area under study comes under Biogeographic zone 3 –The Indian desert and in Biotic Province -3B 1 Kutch plateau. The study area is situated in the semi-arid/arid region of Kachchh district and is sharply demarcated by its vegetation, which was mainly consists of either xerophytes or short-lived annuals. Topography of the region was characterized by mainly barren lands or fallow lands as well as few patches agricultural fields. Fallow lands were covered with weeds like, *Cassia italica*, and *Cassia auriculata*.

Because of the heavy rain fall experienced in this region during the last monsoon, many water bodies of various sizes are observed in this region among them, the village “talab” of Bhimasar village, locally called as “Chhakapir Talab” attract many aquatic birds including many migratory species located at just boundary of the project. One water body located just outside the M/s Welspun India complex created due to the discharge and storage of sewage from The Anjar Municipality ( 230 06’ 39.2”, 700 03’54.6” ) have great potential for feeding and breeding of the migratory birds and other water fowls ; during the current baseline survey, > 50 Black-headed Ibis (*Threskiornis melanocephalus*), >10 Spot-billed Duck (*Anas poecilorhyncha*), 3 Eurasian Spoonbill (*Platalea leucorodia*), 3 Painted Stork (*Mycteria leucocephala*), 3 Dalmatian Pelican (*Pelecanus crispus*), 1 Great White Pelican (*Pelecanus onocrotalus*), > 100 Indian Cormorant (*Phalacrocorax fuscicollis*), >100 Black-winged Stilt (*Himantopus himantopus*), > 50 Red-wattled Lapwing (*Vanellus indicus*) were observed in this shallow water body.

The vegetation of this area can be classified on the basis of habitats as; open fallow lands, areas under cultivations, scrub vegetation. The dominant tree species, herbs, shrubs, climbers and major crops, were documented during this base line study.

The tree population was very less in this part of Kachchh district. The dominant trees growing in this area are *Acacia nilotica*, *Acacia leucophloea*, *Balanites aegyptiaca*, *Acacia catechu*, *Azadirachta indica*, *Salvadora persica* and *S. oleoides*.

Shrubs are the dominant perennials of this area, represented mainly by, *Prosopis juliflora*, *Cassia auriculata*, *Aerva persica*, *Calotropis procera*, *Calotropis gigantea*, *Zizyphus nummularia*, *Tecoma stans*, *Ipomoea fistulosa*, *Euphorbia nivulia* and *Capparis decidua*.

Open fallow lands is the most dominant landscape pattern of the study area. These fallow lands were dominated by the herbaceous species; *Cassia italica*, *Leptadenia pyrotechnica*, *Cressa cretica*, *Crotalaria bruhia*, *Indigofera oblongifolia*, *Fagonia indica* and *Boerhavia diffusa*.

Hedge vegetation mainly consisted of various climbers and stiff shrubs like *Balanites aegyptiaca*, *Leptadenia pyrotechnica*, *Aerva persica*, *Zizyphus nummularia*, *Capparis decidua*, *Ipomoea obscura*, and *Prosopis juliflora*

#### Status of forest and their category in the study area

No natural forest land was observed in the study area

#### List of Birds observed during survey

Old Common name	New Common Name	Scientific Name	Distribution Status	Relative abundance In study area	IUCN status Ver3.1
<b>I ORDER: ANSERIFORMES Family: Anatidae (Ducks and teals)</b>					
Common Teal	Common Teal	<i>Anas crecca</i>	R	UC	Least Concern
Spotbill	Spot-billed Duck	<i>Anas poecilorhyncha</i>	R	C	Least Concern
<b>II ORDER: APODIFORMES</b>					
<b>Family: Apodidae (swifts)</b>					
Common Swift	Common Swift	<i>Apus apus</i>	R	LC	Least Concern
House swift	Little Swift	<i>Apus affinis</i>	R	UC	Least Concern
<b>III. ORDER: FALCONIFORMES</b>					
<b>Family: Accipitridae (vulture, Sparrow hawk, Eagle, Harrier, Kite and Vulture)</b>					
Shikra	Shikra	<i>Accipiter badius</i>	R	Uc	Least Concern
Black-winged Kite	Black-winged Kite	<i>Elanus caeruleus</i>	R	C	Least Concern
Sparrow-hawk	Eurasian Sparrow-hawk	<i>Accipiter nisus</i>	R	UC	Least Concern
<b>IV. ORDER: : CICONIIFORMES</b>					

Old Common name	New Common Name	Scientific Name	Distribution Status	Relative abundance In study area	IUCN status Ver3.1
<b>Family: Ardeidae (heron, Egret, Bittern)</b>					
Cattle Egret	Cattle Egret	<i>Bubulcus ibis</i>	R	C	Least Concern
Little Egret	Little Egret	<i>Egretta garzetta</i>	R	C	Least Concern
Large Egret	Great Egret	<i>Ardea alba</i>	R	C	Least Concern
Pond Heron	Indian Pond-Heron	<i>Ardeola grayii</i>	R	UC	Least Concern
Purple Heron	Purple Heron	<i>Ardea purpurea</i>	R	R	Least Concern
Indian Reef Heron	Western Reef-Egret	<i>Egretta gularis</i>	R	UC	Least Concern
<b>Family: Anhingidae</b>					
Darter or Snake Birds	Oriental Darter	<i>Anhinga melanogaster</i>	R	R	Least Concern
<b>Family: Charadriidae (Plover, Stilt, Oystercatcher, Lapwing, Avocet)</b>					
Black-winged Stilt	Black-winged Stilt	<i>Himantopus himantopus</i>	R	LC	Least Concern
Red-wattled Lapwing	Red-wattled Lapwing	<i>Vanellus indicus</i>	R	LC	Least Concern
<b>Family: Ciconiidae (Open bill, stork, Adjutant)</b>					
Painted Stork	Painted Stork	<i>Mycteria leucocephala</i>	R	R	Near threatened A2bcd+3bcd+4bcd
<b>Family: Pelecanidae (Pelican)</b>					
Dalmatian Pelican	Dalmatian Pelican	<i>Pelecanus crispus</i>	WM	R	Near Threatened A3cde ver 3.1
White or Rosy Pelican	Great White Pelican	<i>Pelecanus onocrotalus</i>	WM	R	Least Concern
<b>Family: Phalacrocoracidae ( Cormorant)</b>					
Indian Shag	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	R	LC	Least Concern
<b>Family: Podicipedidae (Grebe)</b>					
Little Grebe	Little Grebe	<i>Tachybaptus ruficollis</i>	R	UC	Least Concern
<b>Family: Pteroclididae (Sandgrouse)</b>					
Indian Sandgrouse	Chestnut-bellied Sandgrouse	<i>Pterocles exustus</i>	R	UC	Least Concern
<b>Family: Threskiornithidae (Spoonbill and Ibis)</b>					
Spoonbill	Eurasian Spoonbill	<i>Platalea leucorodia</i>	R	R	Least Concern
Black Ibis	Red-naped Ibis	<i>Pseudibis papillosa</i>	R	R	Least Concern
White Ibis	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	R	UC	Near threatened A2bcd+3bcd+4bcd
<b>V. ORDER: COLUMBIFORMES</b>					
<b>Family: Columbidae (Pigeon, Dove)</b>					
Blue Rock Pigeon	Rock Pigeon	<i>Columba livia</i>	R	C	Least Concern
Spotted Dove	Western Spotted Dove	<i>Streptopelia suratensis</i>	R	C	Least Concern
Ring Dove	Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	R	C	Least Concern
Rufous Turtle Dove	Oriental Turtle-Dove	<i>Streptopelia orientalis</i>	R	LC	Least Concern

Old Common name	New Common Name	Scientific Name	Distribution Status	Relative abundance In study area	IUCN status Ver3.1
<b>VI Order: Coraciiformes</b>					
<b>Family: Alcedinidae (King fisher)</b>					
Small Blue King Fisher	Common Kingfisher	<i>Alcedo atthis</i>	R	LC	Least Concern
<b>Family: Cerylidae</b>					
Pied Kingfisher	Pied Kingfisher	<i>Ceryle rudis</i>	R	R	Least Concern
<b>Family: Dacelonidae (King fishers)</b>					
White-breasted Kingfisher	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	R	UC	Least Concern
<b>Family: Coraciidae (Roller)</b>					
BlueJay or Roller	Indian Roller	<i>Coracias benghalensis</i>	R	UC	Least Concern
<b>Family: Meropidae (Bee Eater)</b>					
Small Green bee-eater	Little Green Bee-eater	<i>Merops orientalis</i>	R	LC	Least Concern
<b>VII.ORDER: CUCULIFORMES</b>					
<b>Family: Centropodidae (Cocucal)</b>					
Crow-Pheasant or Coucal	Greater Coucal	<i>Centropus sinensis</i>	R	UC	Least Concern
<b>Family: Cuculidae (cuckoo, Koel)</b>					
Koel	Asian Koel/ Wetsern Koel	<i>Eudynamis scolopacea</i>	R	UC	Least Concern
Indian Cuckoo	Indian Cuckoo	<i>Cuculus micropterus</i>	R	UC	Least Concern
<b>VIII ORDER: GALLIFORMES</b>					
<b>Family: Phasianidae (Peafowl , Partridge)</b>					
Common Peafowl	Indian Peafowl	<i>Pavo cristatus</i>	R	UC	Least Concern
<b>IX ORDER: GRUIFORMES</b>					
<b>Family: Rallidae ( Waterhen, coot, crane water cock, Moorhen, Rail,)</b>					
White-breasted Water hen	White-breasted Water hen	<i>Amaurornis phoenicurus</i>	R	LC	Least Concern
<b>X. ORDER: PASSERIFORMES</b>					
<b>Family: Corvidae</b>					
Large Cuckoo-shrike	Large Cuckoo-shrike/Black faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	R	UC	Least Concern
Raven	Common Raven	<i>Corvus corax</i>	R	UC	Least Concern
House Crow	House Crow	<i>Corvus splendens</i>	R	LC	Least Concern
Black drongo- King Crow	Fork tailed Drongo	<i>Dicrurus adsimilis</i>	R	LC	Least Concern
<b>Family: Muscicapidae ( Short wing, Chat, Robin, Shama)</b>					
Indian Robin	Indian Robin	<i>Saxicoloides fulicata</i>	R	C	Least Concern

Old Common name	New Common Name	Scientific Name	Distribution Status	Relative abundance In study area	IUCN status Ver3.1
Magpie-Robin	Oriental Magpie-Robin	<i>Copsychus saularis</i>	R	C	Least Concern
Pied Bushchat	Pied Bushchat	<i>Saxicola caprata</i>	R	C	Least Concern
<b>Family: Nectariniidae (Sun Birds, Flower pecker, Spider hunter )</b>					
Purple Sunbird	Purple Sunbird	<i>Nectarinia asiatica</i>	R	LC	Least Concern
Small Sunbird	Crimson-backed Sunbird	<i>Nectarinia minima</i>	R	LC	Least Concern
<b>Family: Passeridae (Avadavat, Pipit, Wagtail, Munia, Snowfinch, sparrow)</b>					
House Sparrow	House Sparrow	<i>Passer domesticus</i>	R	LC	Least Concern
<b>Family: Pycnonotidae (Bulbul, finchbil)</b>					
Red-whiskered Bulbul	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	R	LC	Least Concern
Red-vented Bulbul	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R	LC	Least Concern
White-Cheeked Bulbul	White-eared Bulbul	<i>Pycnonotus leucotis</i>	R	UC	Least Concern
<b>Family: Sturnidae (Myna, Starling)</b>					
Bank Myna	Bank Myna	<i>Acridotheres ginginianus</i>	R	LC	Least Concern
Indian Myna	Common Myna	<i>Acridotheres tristis</i>	R	LC	Least Concern
<b>Family: Sylviidae ( Warbler, Browning, Fulvetta ,Babbler, Laughing thrash, Tailor birds)</b>					
Common Babbler	Common Babbler	<i>Turdoides caudatus</i>	R	LC	Least Concern
Jungle Babbler	Jungle Babbler	<i>Turdoides indica</i>	R	LC	Least Concern
Tailorbird	Common Tailorbird	<i>Orthotomus sutorius</i>	R	LC	Least Concern
<b>XI. ORDER: PSITTACIFORMES</b>					
<b>Family: Psittacidae (Parrot and Parakeet)</b>					
Rose-ringed Parakeet	Rose-ringed Parakeet	<i>Psittacula krameri</i>	R	LC	Least Concern

Note: Distribution status : R = Widespread Resident, WM: winter migrant Ref WCMC, Check list of Indian Birds/ IUCN 2021-2 The IUCN Red List of Threatened Species Version 2021-2 [https:// www. Iucn redlist .org](https://www.Iucnredlist.org) Bird Life International. 2018, Bird Life International. 2016.

Kumar, A., J.P. Sati and P.C. Tak (2003): Checklist of Indian Water birds. BUCEROS 8 (1): 30 pp  
Relative Abundance: VC: Very common, C: Common, LC: Locally common, UC: Un Common and Rare; Rare.  
IUCN Status : ver 3.1 (LC)Least Concern, Near Threatened

Few of the sighted birds were evaluated as near threatened by IUCN, 2021-2. A taxon is Near Threatened, when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable categories, but is close to qualifying or is likely to qualify for a threatened category in the near future.

#### List of Butterflies

Scientific name & family	Common name
Family Papilionidae	
<i>Papilio polytes</i>	Common Mormon

Scientific name & family	Common name
Family Pieridae	
<i>Eurema hecabe</i>	Common Grass yellow
<i>Catopsilia pomona</i>	Common Emigrant
<i>Delias eucharis</i>	Common Jezebel
<i>Ixias marianne</i>	White orange tip
Family: Nymphalidae	
<i>Danaus chrysippus</i>	Plain Tiger
<i>Danaus genutia</i> Cramer	Stripped Tiger
<i>Hypolimanas misippus</i>	Danaid egg fly
<i>Mycalesis perseus</i>	Common bush brown

#### List of Reptiles

#	Common Name	Scientific name	Relative Abundance In study area	IUCN status Ver3.1
1	Common garden lizard	<i>Calotes versicolor</i> (Daudin)	UC	Least Concern
2	Common rat snake	<i>Ptyas mucosus</i> (Linn.)	UC	-
3	House Gecko	<i>Hemidactylus flaviviridis</i> (Ruppell)	UC	Not evaluated
4	Spotted Indian House Gecko	<i>Hemidactylus brookii</i> (Gray)	C	-
5	Fan-Throated Lizard	<i>Sitana ponticeriana</i> (Cuvier)	LC	Least Concern
6	Indian Cobra★	<i>Naja naja ssp. kaouthia</i> (Linn.)	Secondary	Least Concern
7	Russell's Viper★	<i>Daboia russelii</i> (Shaw and Nodder)	Secondary	Least Concern
8	Common Indian Krait★	<i>Bungarus caeruleus</i> (Schneider)	Secondary	Least Concern

☐ = Not sighted but included as per the information provided by villagers, during the interaction with them with pictorial presentation.

Relative Abundance: VC: Very common, C: Common, LC: Locally common, UC: Un Common and R; Rare.

☐= Not sighted but included as per the information provided by villagers, during the interaction with them with pictorial presentation

#### List of Mammals

#	Common Name	Scientific name	Relative abundance In study area	IUCN status Ver3.1
1	Five striped Palm squirrel	<i>Funambulus pennantii</i> (Wroughton)	C	Least Concern
2	Common House Rat	<i>Rattus rattus</i> (Linnaeus)	C	Least Concern
3	Common Mongoose / Indian Grey Mongoose	<i>Herpestes edwardsi</i> (Geoffroy)	UC	Least Concern
4	Nilgai	<i>Boselaphus tragocamelus</i> (Pallas)	LC	Least Concern
5	Indian Hare	<i>Lepus nigricollis</i> F. Cuvier	UC	Least Concern
6	Wild Boars★	<i>Sus scrofa</i> (Linnaeus)	Secondary	Least Concern

★= Not sighted but included as per the information provided by villagers, during the interaction with them with pictorial presentation.

## IUCN status

### As per IUCN RED (2021-2) list

The IUCN Red List is the world's most comprehensive inventory of the global conservation status of plant and animal species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. With its strong scientific base, the IUCN Red List is recognized as the most authoritative guide to the status of biological diversity. Three sighted birds fall under Near threatened Category (A2bcd+3bcd+4bcd) of IUCN; Black-headed Ibis (*Threskiornis melanocephalus*) Painted Stork *Mycteria leucocephala* and Dalmatian Pelican (*Pelecanus crispus*)

### Near Threatened and birds of the study area

Species	Habitat	Location	Coordinates	Number	Threat status (IUCN,2021-2)
Black-headed Ibis ( <i>Threskiornis melanocephalus</i> )	The species shows a preference for natural wetland habitats, lakes, ponds, water-holes, lagoons, dams, flood plains, marshes, and freshwater and peat swamp forests, although it will also use artificial habitats such as rice paddy-fields, flooded pastures, and cultivated fields	A wet land created due to the discharge and storage of sewage from Anjar Nagrapailka near the Shaik Pir Dargaha located at the boundary of the M/s Welspun India	23 <sup>0</sup> 06' 27.7" 70 <sup>0</sup> 03'41".6"	>50	Near threatened A2bcd+3bcd+4bcd
Painted Stork <i>Mycteria leucocephala</i>	It frequents freshwater marshes, lakes and reservoirs, flooded fields, rice paddies, irrigation canals, freshwater swamp forest, river banks, intertidal mudflats and salt pans	Ajapar	23 <sup>0</sup> 09' 48.7" 70 <sup>0</sup> 06'42".4	2	Near threatened A2bcd+3bcd+4bcd
		A wet land created due to the discharge and storage of sewage from Anjar Nagrapailka near the Shaik Pir Dargaha located at the boundary of the M/s Welspun India	23 <sup>0</sup> 06' 27.7" 70 <sup>0</sup> 03'41".8	2	
		Adrajaj	23 <sup>0</sup> 02' 45.1"	2	

Species	Habitat	Location	Coordinates	Number	Threat status (IUCN,2021-2)
		Near PaTala Hanuman Mandir	70°05'22".5		
		Kidana Talav	23°02' 19.1" 70°06'41".8	1	
Dalmatian Pelican ( <i>Pelecanus crispus</i> )	It occurs mainly at inland, freshwater wetlands but also at coastal lagoons, river deltas and estuaries This species breeds in eastern Europe and east-central Asia, The largest current populations are believed to be in Kazakhstanhis species is dispersive in Europe, and migratory in AsiaIt departs from the colonies between the end of July and September, although a few remain until November (Nelson 2005). It is gregarious during the winter, often occurring in large flocks and foraging communally and cooperatively in small groups (Cramp <i>et al.</i> 1977), although occasionally singly (Cramp <i>et al.</i> 1977). The birds return to their breeding sites in late-January to April, depending on the region (Nelson 2005).	A wet land created due to the discharge and storage of sewage from Anjar Nagrapailka near the Shaik Pir Dargaha located at the boundary of the M/s Welspun India	23°06' 27.7" 70°03'41".8	3	<b>Near Threatened</b> A3cde ver 3.1

Sources :

Birdlife International (2015) Country profile: India. Available from: <http://www.birdlife.org/datazone/country/india>. Checked: 2015-01-25

Source: The IUCN Red List of Threatened Species. Version 2021-2. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded on 15th November 2021.

## As per Indian Wild Life (Protection) Act, 1972

Wild Life (Protection) Act, 1972, as amended on 17th January 2003, is an Act to provide for the protection of wild animals, birds and plants and for matters connected therewith or ancillary or incidental thereto with a view to ensuring the ecological and environmental security of the country.

Some of the sighted fauna were given protection by the Indian Wild Life (Protection) Act, 1972 by including them in different schedules.

Among the birds in the study area, Pea fowl (*Pavo cristatus*), Eurasian Spoonbill (*Platalea leucorodia*) are included in schedule I .of Wild life protection Act (1972), while many other birds are included in schedule IV.

Among the reptiles Indian Cobra (*Naja naja*), and Common Rat Snake (*Ptyas mucosus*) were provided protection as per Schedule-II of Wild life protection act, (1972). Among mammals; Common Mongoose (*Herpestes edwardsi*), are schedule –II mammals. Nilgai (*Boselaphus tragocamelus*) and Wild Boars (*Sus scrofa Linnaeus*) are provided protection by incorporating them in schedule–III. Hares and five stripped squirrels are included in schedule IV of Wild Life Protection act 1972

## Species provided Protection as per Wild Life Protection Act 1972

Group	Species	Nearest village	Coordinates	Number	Schedule Wild Life Protection act 1972.
Birds	<i>Pea fowl (Pavo cristatus)</i> ,	Modavadar	23 <sup>0</sup> 09'01.1'' 70 <sup>0</sup> 08'29.4''	2pea hen	Schedule I
		Satapar	23 <sup>0</sup> 10'05.0'' 70 <sup>0</sup> 02'35.9''	1peacock	
	Eurasian Spoonbill ( <i>Platalea leucorodia</i> )	A wet land created due to the discharge and storage of sewage from Anjar Nagarpalika near the Shaik Pir Dargaha located at the boundary of the M/s. Welspun India	23 <sup>0</sup> 06' 39.2'' 70 <sup>0</sup> 03'54''.6''	3	Schedule I
		Adrajal Near PaTala Hanuman Mandir	23 <sup>0</sup> 02' 45.1'' 70 <sup>0</sup> 05'22''.5''	2	
	<i>few other birds</i>	Various localities the study area			Schedule-IV
Reptiles	<i>Indian Cobra (Naja naja)</i> ,	Secondary			Schedule-II
	<i>Common rat snake (Ptyas mucosus)</i>	Secondary			Schedule-II

Group	Species	Nearest village	Coordinates	Number	Schedule Wild Life Protection act 1972.
Mammals	<i>Common Mongoose (Herpestes edwardsi)</i> ,	Satapar	23 <sup>0</sup> 10'31.1'' 70 <sup>0</sup> 02'07.6.''	1 adult	Schedule-II
	<i>Five striped Palm squirrel (Funambulus pennanii (Wroughton))</i>	Many places	--	>10	Schedule-IV
	Nilgai ( <i>Boselaphus tragocamelus</i> )	A scrub land near Modavadar	23 <sup>0</sup> 09'01.1'' 70 <sup>0</sup> 08'29.4.''	2 female	Schedule-III
	Indian Hare ( <i>Lepus nigricollis</i> F. Cuvier)	A scrub land near Ajapar	23 <sup>0</sup> 09'35.5'' 70 <sup>0</sup> 07'06.6.''	<b>1</b>	schedule IV
	Wild Boars ( <i>Sus scrofa Linnaeus</i> )	Secondary	-		Schedule-III

Source : Wild Life Protection Act 1972 and its amendments



### Conservation Measures

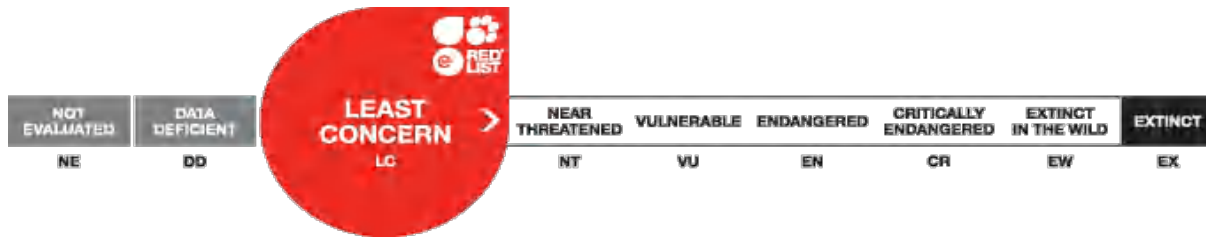
#### Peacock or Indian Peafowl (*Pavo cristatus*) Schedule –I Bird Species

Peacock or Indian peafowl falls under the Scheduled-I category Indian Wild Life Protection Act (1972) Peacock or Indian peafowl (*Pavo cristatus*) is a very familiar bird of Gujarat also recognized as National Bird of India. The few population of this pheasant was reported from some villages of the study area. Once common throughout the wooded lowlands of Gujarat, their population has been declined in recent decades. The male peacock is predominantly blue with a fan-like crest of spatula-tipped wire-like feathers and is best known for the long train made up of elongated upper-tail; these stiff and elongated feathers are raised into a fan and quivered in a display during courtship. The female lacks this feather.



Kingdom	:	Animalia
Phylum	:	Chordata
Class	:	Aves
Order	:	Galliformes
Family	:	Phasianidae
Genus	:	Pavo
Species	:	<i>P. cristatus</i>

**Protection Status: LC**



**National:**

The species receives theoretical protection under the Indian Wildlife (Protection) Act, Schedule I [highest order of protection] of 1972.

**Description:**

The male, known as a peacock, is a large bird with a length from bill to tail of 100 to 115 cm (40 to 46 inches) and to the end of a fully-grown train as much as 195 to 225 cm (78 to 90 inches) and weigh 4–6 kg (8.8–13.2 lbs). The females, or peahens, are smaller at around 95 cm (38 inches) in length and weigh 2.75–4 kg (6–8.8 lbs). Indian Peafowl are among the largest and heaviest representatives of the Phasianidae family. Their size, colour and shape of crest make them unmistakable within their native distribution range. The male is metallic blue on the crown, the feathers of the head being short and curled. The fan-shaped crest on the head is made of feathers with bare black shafts and tipped with blush-green webbing. A white stripe above the eye and a crescent shaped white patch below the eye are formed by bare white skin. The sides of the head have iridescent greenish blue feathers. The back has scaly bronze-green feathers with black and copper markings. The scapular and the wings are buff and barred in black, the primaries are chestnut and the secondaries are black. The tail is dark brown and the "train" is made up of elongated upper tail coverts (more than 200 feathers, the actual tail has only 20 feathers) and nearly all of these feathers end with an elaborate eye-spot. A few of the outer feathers lack the spot and end in a crescent shaped black tip. The underside is dark glossy green shading into blackish under the tail. The thighs are buff colored. The male has a spur on the leg above the hind toe.

Peacocks are polygamous, and the breeding season is spread out but appears to be dependent on the rains. Several males may congregate at a lek site and these males are often closely related. Males at lek appear to maintain small territories next to each other and they allow

females to visit them and make no attempt to guard harems. Females do not appear to favour specific males.

Peafowl are omnivorous and eat seeds, insects, fruits, and reptiles. A large percentage of their food is made up of the fallen berries. Around cultivated areas, peafowl feed on a wide range of crops such as groundnut, tomato, paddy, etc. Around human habitations, they feed on a variety of food scraps. In the countryside, it is particularly partial to crops and garden plants.

### **Habitat:**

The Indian Peafowl is found mainly on the ground in open scrub forest or on land under cultivation where they forage for berries, grains but will also prey on snakes, lizards, and small rodents. Their loud calls make them easy to detect, and in forest areas often indicate the presence of a predator such as a tiger. They forage on the ground in small groups and will usually try to escape on foot through undergrowth and avoid flying, though they will fly into tall trees to roost. The bird has a celebrated status in Indian mythology [http://en.wikipedia.org/wiki/Greek\\_mythology](http://en.wikipedia.org/wiki/Greek_mythology), and hence protected culturally in India especially in Gujarat. The Indian Peafowl is listed as Least Concern by IUCN.

### **Status in the Study Area:**

No peacock was sighted at the projects site. The direct sightings of the peacock were located near the agriculture lands. This species is well adapted to natural village environment setting. Day time they temporarily move towards the surrounding agriculture areas for feeding while during night time they roost on the trees present in the village and in the agriculture hedges.

### **Location details of Peacock or Indian peafowl sighting in the study area**

<b>Name of Fauna</b>	<b>Location</b>	<b>Latitude and Longitude</b>	<b>No. of Fauna</b>	<b>Category</b>
Pea fowl ( <i>Pavo cristatus</i> )	Modavadar	23 <sup>09</sup> '01.1" N 70 <sup>08</sup> '29.4" E	2 pea hen	Schedule I
	Satapar	23 <sup>10</sup> '05.0" N 70 <sup>02</sup> '35.9" E	1 peacock	

### **Threats in the Study Area**

- No perceptible threats were identified in the villages surveyed. Village residents are against hunting or poaching of the peafowl, due to culture and mythology reasons.

Adult peafowl can usually escape ground predators especially stray dogs by flying into trees. Foraging in groups provides some safety as there are more eyes to look out for predators.

### **Conservation through Habitat Improvement and Awareness**

- Habitat improvement programme will be undertaken through plantation of suitable tree species in the surrounding villages. While selecting the tree/ shrub species care shall be provided for beery plants which attract these birds.
- This tree will provide the shelters for these birds while escaping from the predators
- During summer period, villagers will be encouraged to use the old earthen pots to fill with water for drinking these birds
- Summer is the time when these birds are facing shortage of feeds, there by supplying the feed like Bajri, Juwar, Maize to the identified surrounding villages with good population of Indian peafowls will suffice the problem of food shortage.
- The proponent can directly supply these feeds to the villages directly or by funding to the NGOs active in this mission.

### **Conservation Measures for Eurasian Spoonbill (*Platalea leucorodia*)**

The Eurasian Spoonbill (*Platalea leucorodia*) is about 60-70 centimetres long and weighs 1,800-2,400 grams. The bill is most characteristic, with a spoon-like shape. The plumage is predominantly white and, during the breeding season, adult birds have a large plume on the back of the head and an orange/yellow band across the breast. Juveniles and sub-adults show black tips on wing feathers



Kingdom : Animalia  
 Phylum : Chordata  
 Class : Aves  
 Order : Pelecaniformes  
 Family : Threskiornithidae  
 Genus : Platalea  
 Species : *P. leucorodia*

**Protection Status: LC**



### **Geographic Range**

This species has an extremely large range; The Eurasian Spoonbill (*Platalea leucorodia*) is distributed from the East Atlantic to India and China. The Eurasian Spoonbill has a wide but fragmented Palearctic distribution, with a breeding range that extends from Europe to China, India, the Red Sea and Northwest Africa (Cramp & Simmons 1977; Hancock et al. 1992).

### **Habitat and Ecology**

Palearctic breeding populations are fully migratory (del Hoyo et al. 1992) but may only travel short distances (Snow and Perrins 1998) while other populations are resident and nomadic or partially migratory (del Hoyo et al. 1992). As a wading bird, it has long legs like herons and

storks. Males are larger than females with longer bills and legs. It lives in habitats with changing water levels such as tidal areas, river deltas, estuaries, alluvial wetlands, lakes and man-made wetlands such as carp fish farms or reservoirs. It is a colonially breeding species, breeding in mixed colonies with other water birds (herons, egrets, cormorants, gulls and/or tern species), nesting in trees, reed beds, dunes, salt marshes and, in arid areas, in low shrubs or on the bare ground, surrounded by water. It forages in shallow open waters and prefers mudflats, searching for small fish species, shrimps or other aquatic invertebrates.

### **Location details of spoon bill sighting in the study area**

<b>Name of Fauna</b>	<b>Location</b>	<b>Latitude and Longitude</b>	<b>No. of Fauna</b>	<b>Category</b>
Eurasian Spoonbill ( <i>Platalea leucorodia</i> )	A wet land created due to the discharge and storage of sewage from Anjar Nagarpalika near the Shaik Pir Dargaha located at the boundary of the M/s Welspun India	23 <sup>0</sup> 06' 39.2" N 70 <sup>0</sup> 03' 54".6" E	3	Schedule I
	Adrajaj Near PaTala Hanuman Mandir	23 <sup>0</sup> 02' 45.1" N 70 <sup>0</sup> 05' 22".5" E	2	

### **Diet**

Its diet consists of adult and larval insects (e.g. water beetles, dragonflies, caddis flies, locusts and flies), molluscs, crustaceans, worms, leeches, frogs, tadpoles and small fish (del Hoyo et al. 1992) up to 10-15 cm long (Hancock et al. 1992). It may also take algae or small fragments of aquatic plants (del Hoyo et al. 1992).

### **Breeding site:**

The nest is a platform of sticks and vegetation constructed on the ground on islands in lakes and rivers, or alternatively in dense stands of emergent vegetation (e.g. reed beds).

### **Threats:**

The main historic threat for Spoonbills is the loss of habitat for feeding and breeding. Feeding grounds have, over the years, been drained, regulated, changed into intensive agricultural land or fish farms, abandoned, become overgrown by vegetation succession, lack of grazing or invasion by alien species, or used for recreation (disturbance) activities. Overfishing and water pollution also pose huge problems in some areas.

The species is threatened by habitat degradation through drainage and pollution (del Hoyo et al. 1992) (e.g. chlorinated hydrocarbons) (Hancock et al. 1992), and is especially affected by the disappearance of reed swamps due to agricultural and hydroelectric development (Hancock et al. 1992).

Over-fishing and disturbance have caused population declines in Greece (Hancock et al. 1992), and human exploitation of eggs and nestlings for food has threatened the species in the past (Hancock et al. 1992, del Hoyo et al. 1992).

Poaching and collisions with overhead electricity cables are the main non-natural causes of death during migration (Triplet et al. 2008). The species is also susceptible to avian influenza so may be threatened by future outbreaks of the virus (Melville and Shortridge 2006).

Many other factors threatening the wetland ecosystem and in turn the bird population especially in India are poaching of birds, heavy use of pesticides during paddy and wheat cultivation.

### **Conservation Actions Underway:**

The species is listed in Appendix II of CITES, Annex I of the EU Birds Directive, Annex II of the Bern Convention, Annex II of the Convention on Migratory Species, under which it is covered by the African-Eurasian Water bird Agreement (AEWA).

### **Conservation Actions Recommended:**

#### **Conservation through and awareness Education and Training**

As most of the sighting of this bird were near in water logged region in privately owned agriculture fields, conservation through Habitat Improvement is not recommended. Hence the Conservation measures recommended is through education and awareness programme.

- Public education programs about the importance of wetland conservation and sustainable use of wetland resources.
- Develop local school programs that focus on the biology of these bird, threats to birds , minimizing of human impacts, and prevention of egg-stealing and chick-capturing.
- Support farmer education and extension programs to improve farm practices and to provide information about sustainable agricultural practices and the importance of wetlands.
- Encourage a mosaic of small natural wetlands in heavily farmed areas
- Educate to Control pesticide use and industrial effluent disposal around feeding areas.



## Chapter-5

### Yearly Fund allocation for Wildlife Conservation plan for Schedule-I fauna through Habitat Improvement and Awareness Programme

Conservation measures	Proposed Conservation measures	Yearly allocation in Indian Rupees	Allocation in Indian Rupees For three years after commencement of operation
Conservation through Habitat Improvement	<p>Plantation of suitable tree species in clusters pattern in the surrounding villages, especially around the periphery of village ponds or near scared grooves etc as per the guidance of Local Forest Department officials,</p> <p>For Feeding and nesting places of Eurasian Spoonbill (<i>Platalea leucorodia</i>) and Indian peafowl (<i>Pavo cristatus</i>)</p> <p>The major threat observed in this area is the predation by stray dogs.</p> <p>These birds can escape these ground predators by flying to near by trees.</p> <p>Plantation 1000 trees per year for next three years @ Rs 400 per annum for one sapling including cost of sapling, plantation, protection, maintenance.</p> <p>The plantation area's geo coordinates were maintained by the project proponent for monitoring and</p>	<b>3,00,000.0/-</b>	<b>9,00,000.0/-</b>
	<p>Replantation based on survival rate @ Rs 100 for tree for plantation, Maximum 400 tree saplings considering 60% Survival rate</p>	<b>40,000.0/-</b>	<b>1,20,000/-</b>
	<p>Supplying the feed like Bajri, Juwar, Maize to the identified surrounding villages for Indian peafowl (<i>Pavo cristatus</i>) during summer months.</p>	<b>50,000.0/-</b>	<b>1,50,000/-</b>

<b>Conservation measures</b>	<b>Proposed Conservation measures</b>	<b>Yearly allocation in Indian Rupees</b>	<b>Allocation in Indian Rupees For three years after commencement of operation</b>
	Maintenance of water holes and watering in the nearby villages in summer times.	<b>50,000.0/-</b>	<b>1,50,000/-</b>
Conservation through Awareness creation	Public education programs about the importance of wetland conservation and sustainable use of wetland resources. Develop local school programs that focus on the biology of these birds, threats to birds, minimizing of human impacts, and prevention of egg-stealing and chick-capturing. Support farmer education and extension programs to improve farm practices and to provide information about sustainable agricultural practices and the importance of wetlands. Encourage a mosaic of small natural wetlands in heavily farmed areas. Educate to Control pesticide use and industrial effluent disposal around feeding areas.	<b>50,000.0/-</b>	<b>1,50,000/-</b>
Monitoring	Monitoring of Development work as per the guidelines of Gujarat Chief Wild Life warden VPS/Te-32/B/2014-33/2020-2021 dated 24/06/2021	<b>1,00,000.0/-</b>	<b>3,00,000.0/-</b>
Total Wild Life Conservation Plan Fund allocation for annual and next three years after obtaining Environment Clearance for the proposed project expansion		<b>5,90,000.0/-</b>	<b>17,70,000.0/-</b>

## Secondary Source of Information

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- Turtle trade in India a study of tortoise and turtle WWF-India
- Bhupathy etal (2014) *Lissemys punctata* (Bonnaterre 1789) – Indian Flapshell Turtle in Conservation Biology of Fresh water turtles and tortoise © 2014 by Chelonian Research Foundation Published 20 February 2014
- Rahman, S., Ahmed, M.F., Choudhury, B.C., Praschag, P. & Singh, S. 2021. *Lissemys punctata*. The IUCN Red List of Threatened Species 2021: e. T123802477A3008930. <https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T123802477A3008930.en>.  
Downloaded on 19 November 2021.



# Annexure-IX

## Water consumption & waste water generation:

Total raw water consumption in the proposed expansion unit will be approximately 3,861.00 m<sup>3</sup>/day (3,761.00 m<sup>3</sup>/day Industrial + 100.00 m<sup>3</sup>/day Domestic). The water will be sourced from sister concern unit M/s. Welspun India Limited from its 30 MLD Sewage treatment plant after recycling & reuse of municipal sewage generated from the nearby Municipalities.

### Water consumption:

Sr. No.	Activity	Water Consumption KLD
1	Domestic	100.00
2	Process	611.00
3	Cooling	3000.00
4	DM	150.00
<b>Total (1+2+3+4)</b>		<b>3861.00</b>

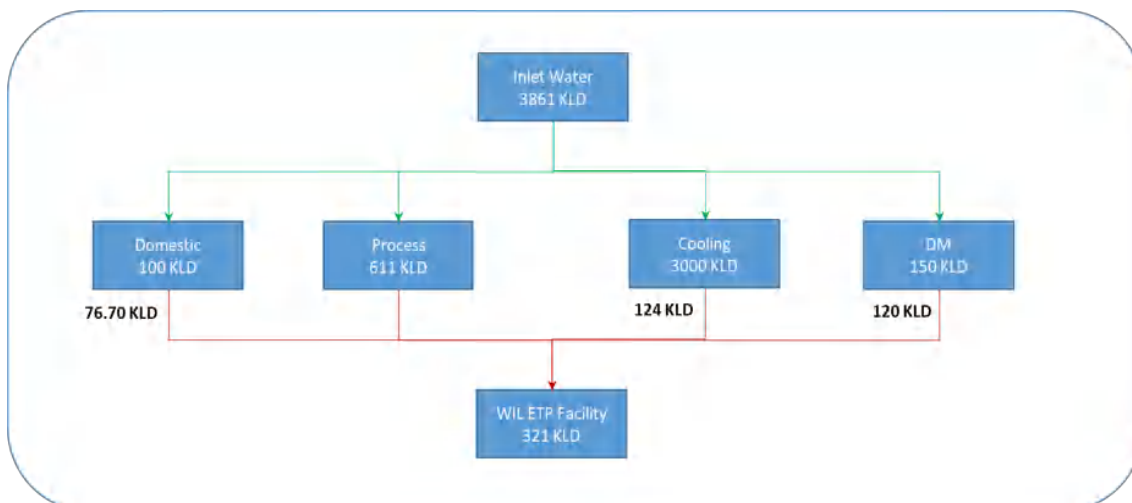
### Waste Water Generation and its Management

The total wastewater generation from the proposed expansion project will be 321.00 KLD. It will be sent to M/s. Welspun India Limited for treatment having ETP capacity of 30 MLD, Physical, Chemical and Biological Oxidation plant, UF and RO system of having the capacity to recycle & reuse 23 MLD of wastewater.

### Details of Wastewater Generation

Sr. No.	Activity	Waste Water Generation KLD	Remark
1	Domestic	77.00	
2	Process	0.00	
3	Cooling	124.00	3.63 % Evaporation & 0.5 % Blowdown (Total -4.13%)
4	DM	120.00	
<b>Total</b>		<b>321.00</b>	

### Water balance diagram:



## MEMORANDUM OF UNDERSTANDING

BY & BETWEEN

**WELSPUN INDIA LTD**

AND

**ANJAR TMT STEEL PRIVATE LTD**

This MEMORANDUM OF UNDERSTANDING (MoU) dated 01 /11//2022 sets forth the basic understandings between

**Welspun India Ltd, Anjar**, a limited company incorporated under the Companies Act 1956, having its registered office at **Land Survey No.675, Welspun City, Village- Versamedi, Ta- Anjar, Dist- Kutch-Gujarat-370110** with the **GPCB ID, 18108** (Hereinafter referred to as “WIL”, which expression, unless repugnant to the context or meaning thereof shall be deemed to include its successors and permitted assigns)

And

**ANJAR TMT STEEL PRIVATE LTD**, a limited company incorporated under the Companies Act 1956, having its registered office at **Land Survey No.: 653,655, Village- Versamedi, Ta- Anjar, Dist- Kutch-Gujarat-370110** with **GPCB ID : 82601** (Hereinafter referred to as “ATSP”, which expression, unless repugnant to the context or meaning thereof shall be deemed to include its successors and permitted assigns)

Whereas,

WIL is in the business of trading and manufacturing Home Textiles at its plant located at Welspun City, Village Versamedi, Anjar, District Kutch, Gujarat. WIL having ETP with capacity of 24 MLD, Physical, Chemical & Biological Oxidation Plant & UF & RO System of having the capacity to recycle & Reuse 23 MLD of treated wastewater.

Anjar TMT Steel Private Ltd. has been requested by WIL to supply of 3861KLD for UF & RO recycled water of 40MLD STP for use of water consumption at ATSP from the existing operational STP of WIL.

Welspun India Limited

Welspun House, 6th Floor, Kamala City, Senapati Bapat Marg, Lower Parel (West), Mumbai 400 013, India.  
T +91 22 6613 6000 / 2490 8000 F +91 22 2190 8020 / 2490 8021

E-mail: companysecretary\_wil@welspun.com Website: www.welspunindia.com

Registered Address: Welspun City, Village Versamedi, Taluka Anjar, District Kutch, Gujarat 370 110, India.  
T +91 2836 661 111 F +91 2836 279 010

Works: Survey No. 76, Village Morai, Vapi, District Valsad Gujarat 396 191, India.  
T +91 260 2437437 F +91 260 22437088

Corporate Identity Number: L17110GJ1925PLC033271

Anjar TMT Pvt Ltd . has been requested by WIL to treat 321 KLD industrial wastewater into the existing operational ETP. The ATS will be discharged into Welspun India Ltd Centralized ETP plant for further treatment process.

**NOW, THEREFORE,** in consideration of the mutual understandings, covenants, representations and warranties set forth in this MoU, the Parties hereby agree as follows:

- a) ATSPIL has to install a Flow meter with a totalizer at its facility to maintain record of the consumption water on daily basis.
- b) For the Operation and Maintenance WIL & ATSPIL ensure compliance with all laws and regulations as applicable from time to time.
- c) Each Party in good faith perform and carry out in a diligent and professional manner its undertakings described herein.
- d) Neither Party shall be liable to the other for any direct, indirect, consequential, punitive or similar indirect loss or damage, including loss of profit or loss of business opportunity, or for any other costs or expenses of any nature arising out of or in connection with this MoU
- e) This MoU is governed by and will be construed in accordance with the laws of the India. Any dispute or controversy arising under or in connection with this MoU, shall be amicably resolved by the Parties Any dispute or controversy arising under or in connection with this MoU shall be subject to the exclusive jurisdiction of the courts in ANJAR.
- f) **Indemnity-** ATSPIL agrees to defend and to keep WIL, its affiliates and subsidiaries and its associated companies, contractors, personnel, employees, officers and directors, indemnified and saved harmless against all actions, suits, proceedings, claims, costs, damages (including consequential losses), judgments, amounts paid in settlement and expenses including without limitation attorney's fees as may be incurred in connection with investigating, preparing to defend, defending or appeal against any such action, suit, proceeding, claim, inquiry or investigation which may be asserted against or incurred by the WIL by reason of (a) breach or

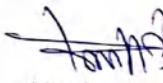
**Welspun India Limited**  
Welspun House, 6th Floor, Kamala City, Senapati Bapat Marg, Lower Parel (West), Mumbai - 400 013, India  
T : +91 22 6677 2490 / 2490 8020 F : +91 22 190 8020 / 2490 8021  
E-mail : companysecretary\_wil@welspun.com Website : www.welspunindia.com  
Registered Address: Welspun City, Village Vers. nedi, Taluka Anjar, District Kutch, Gujarat 370 110, India.  
T : +91 2836 661 111 F : +91 2836 279 010  
Works: Survey No. 76, Village Morai, Vapi, Dist. ct Valsad Gujarat 396 191, India.  
T : +91 260 2437437 F : +91 260 2243708P  
Corporate Identity Number: L17110GJ19P5PLC033271

non-observance of any of the terms and conditions of this MoU by ATSPL; (b) act of negligence or intentional misconduct by ATSPL; (c) any material representation or warranty by ATSPL being found to be misleading or untrue and (d) failure by a Party to fulfil its obligations under any applicable laws

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be executed by and through their duly authorized representatives as of the date written herein. The parties hereto have caused their representative duly authorized for that purpose to sign and execute this MOU and affix hereto their seals on the dates and in the year hereinabove written.

For and on behalf of


**WELSPUN INDIA LTD**

  
(Authorized signatory)

Signature with Seal

For and on behalf of

**ANJAR TMT STEEL PRIVATE LTD**

  
(Authorized signatory)

Signature with Seal

**Welspun India Limited**

Welspun House, 6th Floor, Kamala City, Senapati Bapat Marg, Lower Parel (West), Mumbai 400 013, India.  
T : +91 22 6613 6000 / 2490 8000 F : +91 22 2490 8020 / 2490 8021  
E-mail : companysecretary\_wil@welspun.com Website : www.welspunindia.com

Registered Address: Welspun City, Village Versamedi, Taluka Anjar, District Kutch, Gujarat 370 110, India.  
T : +91 2836 661 111 F : +91 2836 279 010

Works: Survey No. 76, Village Morai, Vapi, District Valsad, Gujarat 396 191, India.  
T : +91 260 2437437 F : +91 260 22437088

Corporate Identity Number: L17110GJ1985PLC033271

## Annexure- XI

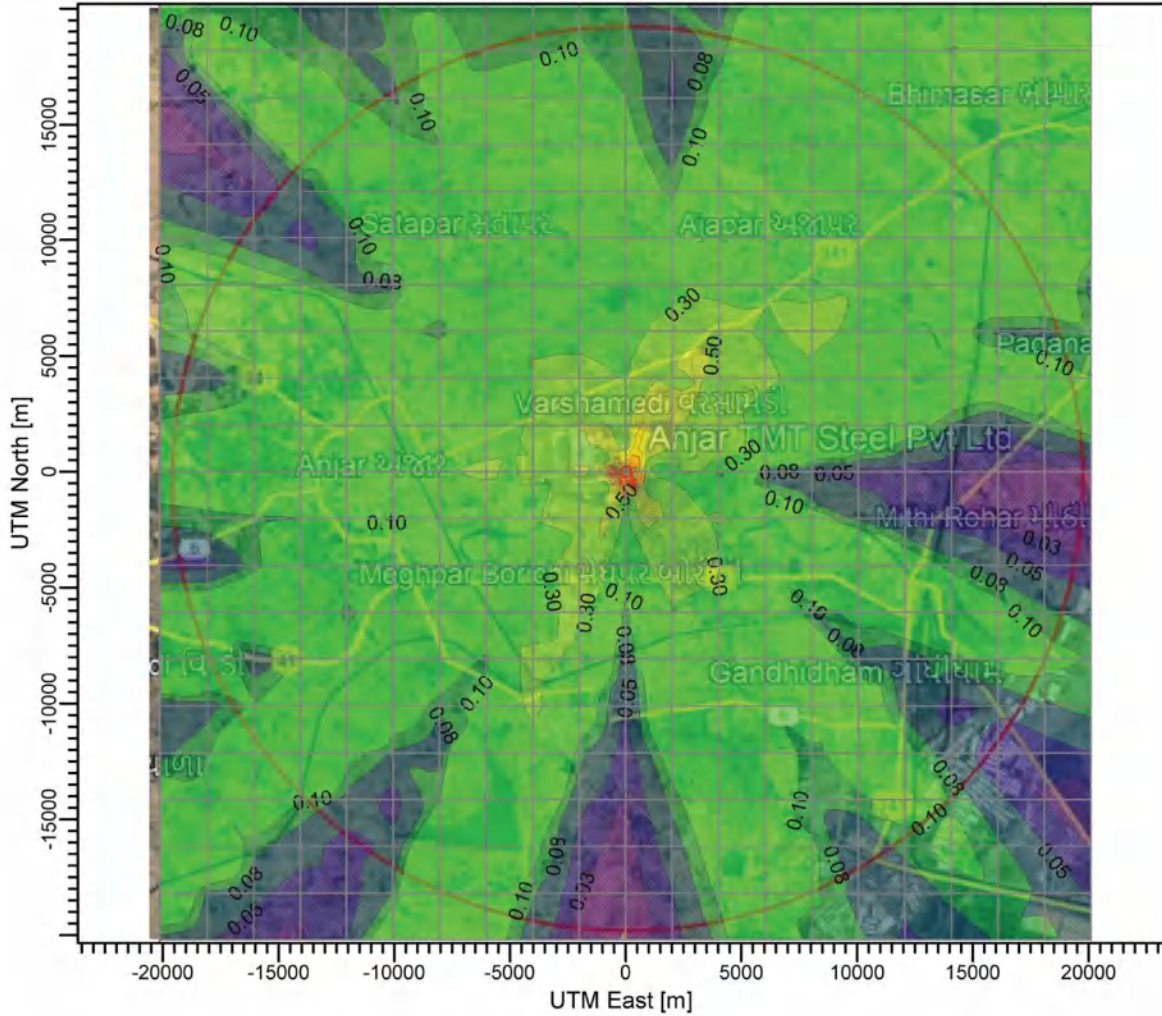
The maximum incremental GLCs due to the proposed project for particulate matter, SO<sub>x</sub> and NO<sub>x</sub> CO are superimposed on the maximum baseline concentrations recorded during the study period to arrive at the likely resultant concentrations. The cumulative concentrations (baseline + incremental) due to proposed project at different receptor site are tabulated below in Table.

### AERMOD Model Output

Sr. No.	Discrete Cartesian Receptors	Maximum Incremental Concentration ( $\mu\text{g}/\text{m}^3$ )											
		PM			SO <sub>2</sub>			NO <sub>x</sub>			CO		
		Baseline Conc	PM WMM	Cumulative Conc. WMM	Baseline Conc	SO <sub>2</sub> WMM	Cumulative Conc. WMM	Baseline Conc	NO <sub>x</sub> WMM	Cumulative Conc. WMM	Baseline Conc	NO <sub>x</sub> WMM	Cumulative Conc. WMM
1.	Project Site	84.90	0.00	84.90	25.45	0.00	25.45	38.57	0.00	38.57	0.32	0.00	0.32
2.	Nr Airport	89.36	0.41	89.77	27.40	0.21	27.61	31.73	0.22	31.95	0.46	0.11	0.57
3.	Versamedi	76.90	0.59	77.49	15.92	0.27	16.19	23.47	0.28	23.75	0.00	0.14	0.14
4.	Anjar Nr APMC	68.60	0.25	68.85	18.45	0.27	18.72	23.45	0.27	23.72	0.20	0.13	0.33
5.	Vijay Nagar	62.03	0.17	62.20	17.45	0.16	17.61	28.84	0.16	29.00	0.00	0.08	0.08
6.	Bhawani Nagar	59.70	0.09	59.79	20.23	0.13	20.36	26.36	0.13	26.49	0.00	0.06	0.06
7.	Adipur	64.39	0.08	64.47	21.99	0.11	22.10	25.99	0.12	26.11	0.00	0.06	0.06
8.	Satapar	69.52	0.14	69.66	18.93	0.13	19.06	24.93	0.14	25.07	0.00	0.07	0.07
	Maximum Incremental GLC in $\mu\text{g}/\text{m}^3$	1.77 $\mu\text{g}/\text{m}^3$			1.58 $\mu\text{g}/\text{m}^3$			1.62 $\mu\text{g}/\text{m}^3$			0.792 $\mu\text{g}/\text{m}^3$		

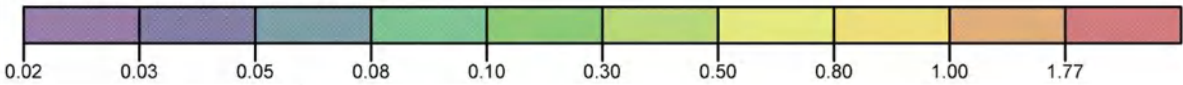
# Spatial distribution of 24-hour average PM conc. ( $\mu\text{g}/\text{m}^3$ )


**PROJECT TITLE:**  
Anjar TMT Steel Pvt Ltd, Anjar, Gujarat



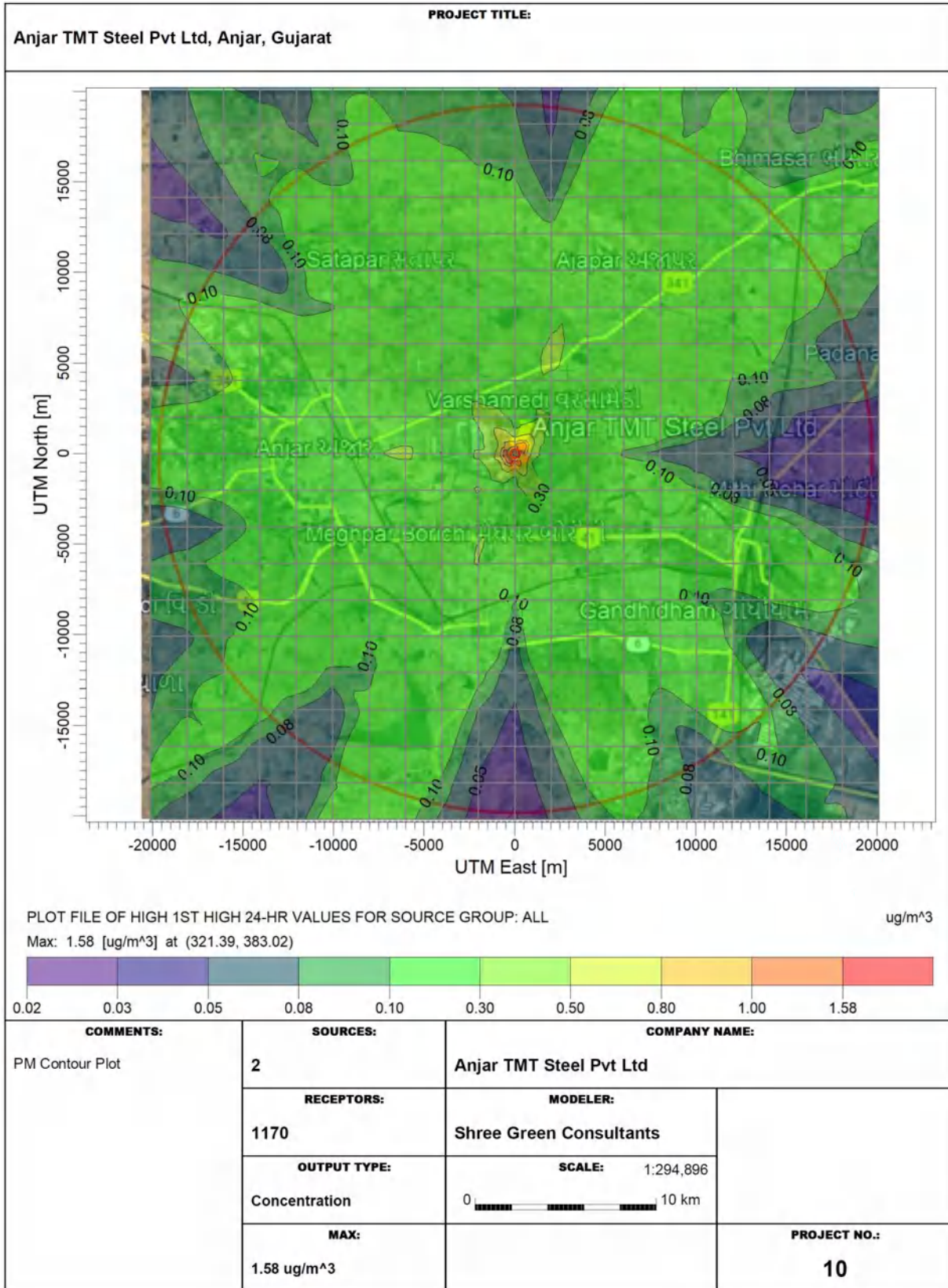
PLOT FILE OF HIGH 1ST HIGH 24-HR VALUES FOR SOURCE GROUP: ALL ug/m<sup>3</sup>

Max: 1.77 [ $\mu\text{g}/\text{m}^3$ ] at (321.39, 383.02)

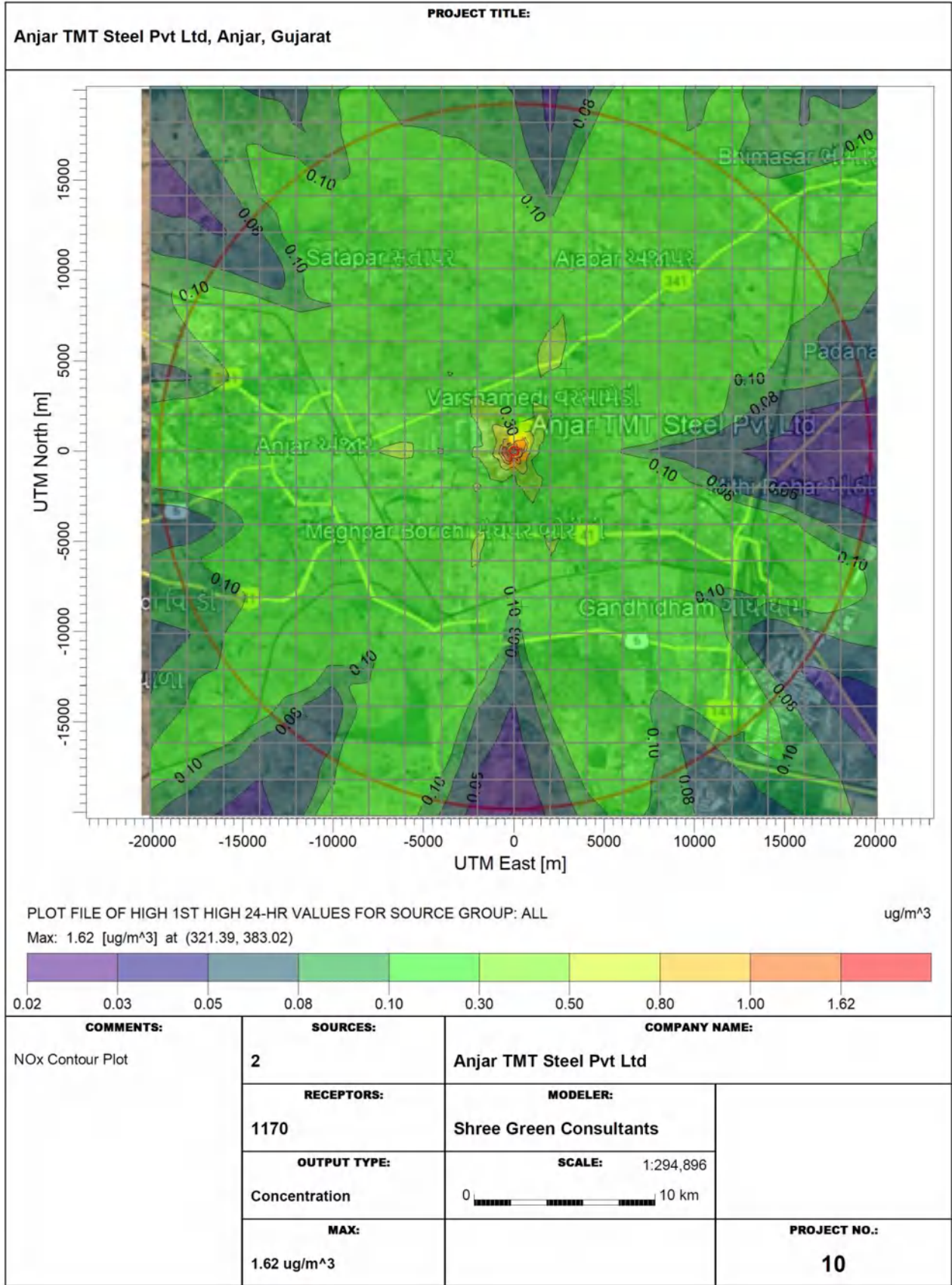


COMMENTS:	SOURCES:	COMPANY NAME:	
PM Contour Plot	10	Anjar TMT Steel Pvt Ltd	
	RECEPTORS: 1170	MODELER: Shree Green Consultants	
	OUTPUT TYPE: Concentration	SCALE: 1:294,930 0  10 km	
	MAX: 1.77 ug/m <sup>3</sup>		PROJECT NO.: 10

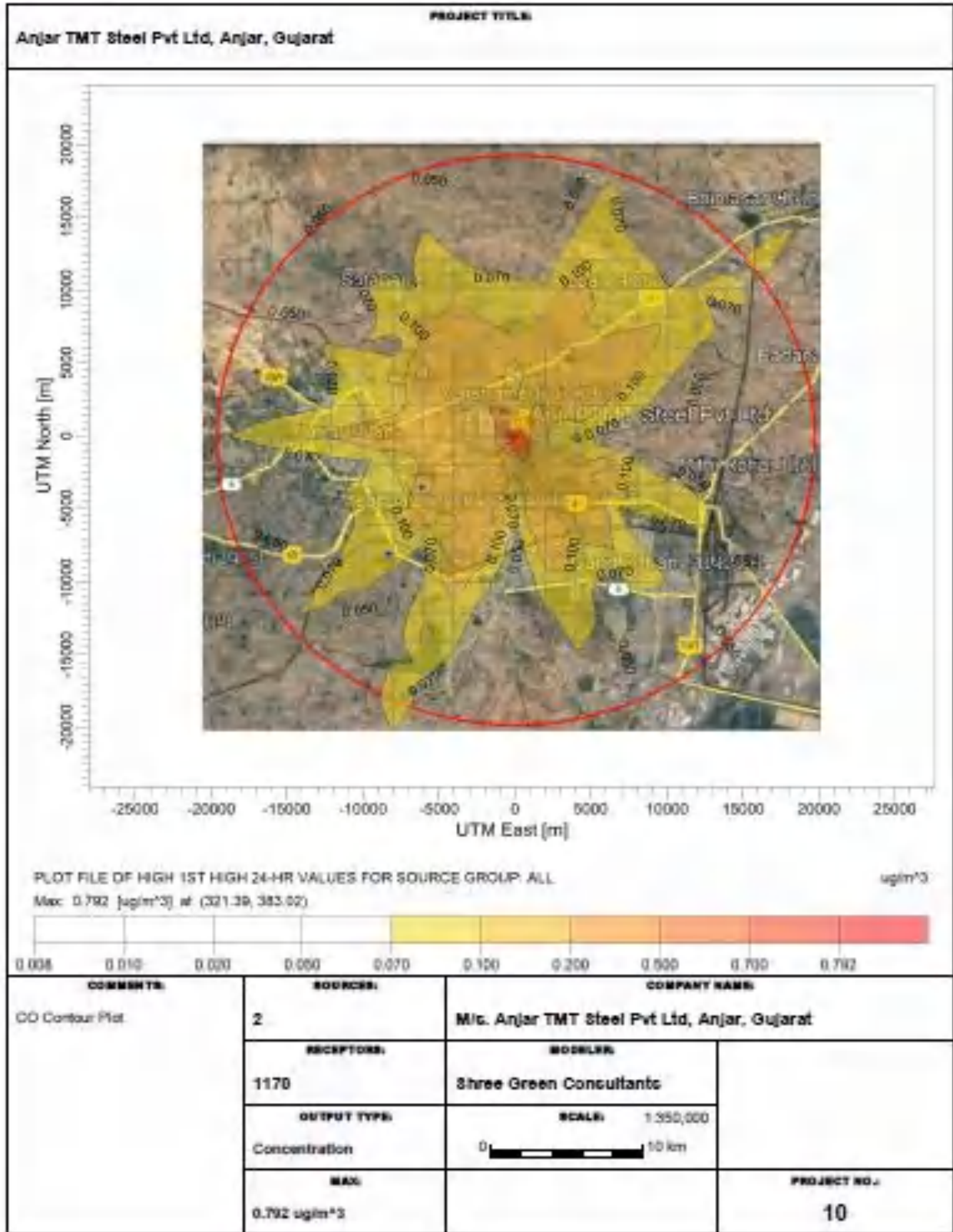
## Spatial distribution of 24-hour average SO<sub>2</sub> conc. ( $\mu\text{g}/\text{m}^3$ )



# Spatial distribution of 24-hour average NO<sub>x</sub> conc. ( $\mu\text{g}/\text{m}^3$ )



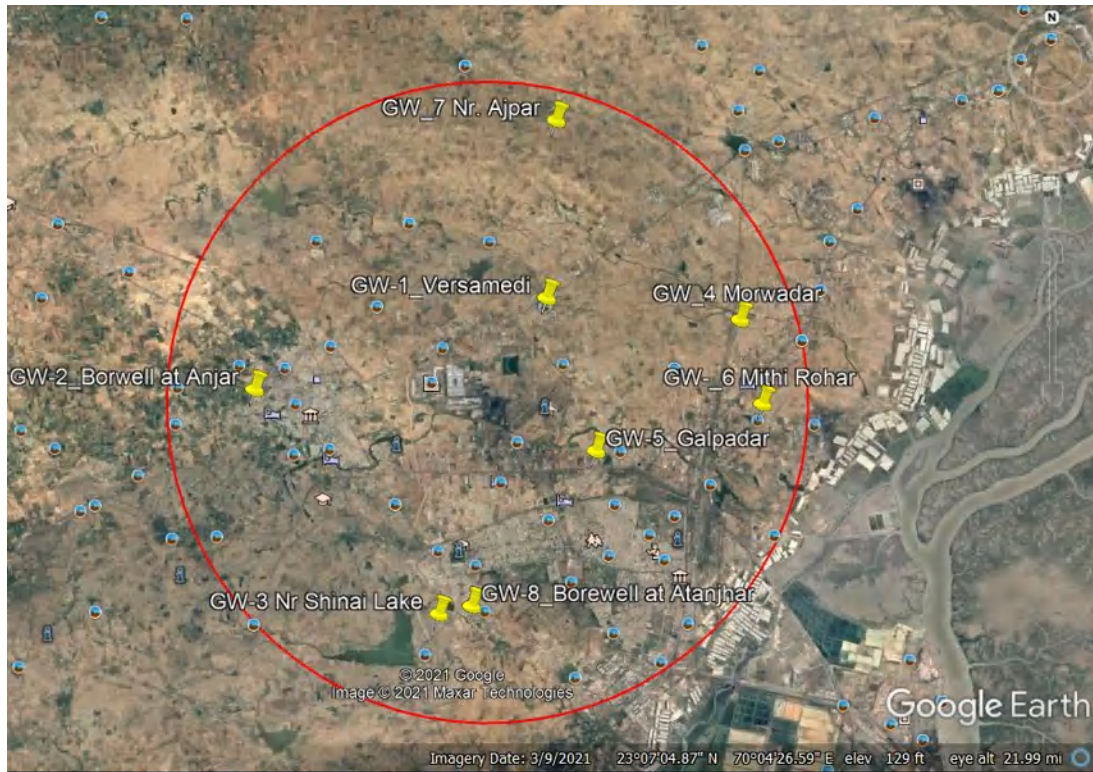
Spatial distribution of 24-hour average CO conc. ( $\mu\text{g}/\text{m}^3$ )



## Annexure-XII

### Baseline data for Ground water & surface water

#### Locations of Ground Water Sampling Stations



#### Details of Ground Monitoring Locations:

Sr. No.	Sampling Locations	Approx. Radial Distance from Project Site (KM)	Bearing W. R.T. Project Site
1.	Versamedi (GW-1)	3.24	NNE
2.	Borewell at Anjar (GW-2)	7.44	W
3.	Nr. Shinai Lake(GW-3)	7.27	SSW
4.	Morwadar (GW-4)	8.04	ENE
5.	Galpadar(GW-5)	3.82	SE
6.	Mithi Rohar(GW-6)	8.48	ESE
7.	Nr Ajpar(GW-7)	8.54	NNE
8.	Borewell at Atanjhar (GW-8)	6.84	S

Sr. No.	Parameters	Unit	Versamedi (GW-1)	Borewell at Anjar (GW-2)	Nr. Shinai Lake (GW-3)	Morwadar (GW-4)	Galpadar (GW-5)	Mithi Rohar (GW-6)	Nr Ajpar (GW-7)	Borewell at Atanjhar (GW-8)	Limits as per IS 10500:2012	
											Desirable	Permissible
1.	pH at 25 °C	pH Unit	7.21	7.24	7.51	7.05	7.39	7.53	7.46	7.68	6.5 - 8.5	No Relaxation
2.	Conductivity at 25 °C	mS/cm	3.11	1.59	8.41	5.23	9.23	4.71	11.1	6.55	--	-
3.	Temperature	°C	26	27	25	29	26	28	27	26	--	-
4.	Turbidity	NTU	<1	<1	1.0	<1	1.5	<1	1.2	1.0	1	5
5.	TDS	mg/L	1802	971	5021	3118	6911	2932	6834	4051	500	2000
6.	Total Alkalinity	mg/L	150	220	350	140	340	370	360	460	200	600
7.	Total Hardness	mg/L	440	310	910	640	1020	590	820	710	200	600
8.	Calcium	mg/L	128.3	116.2	192.4	172.3	216.4	152.3	204.4	184.4	75	200
9.	Magnesium	mg/L	29.2	9.7	104.5	51.0	116.6	51.0	75.3	60.8	30	100
10.	Chloride	mg/L	473.8	241	1357.2	762.8	2129	745.5	1874	912	250	1000
11.	Sulphate	mg/L	212	97.5	605	351	972	279	656	524	200	400
12.	Nitrate Nitrogen	mg/L	8.08	7.61	17.9	12.61	23.7	10.5	21.1	14.1	45	No Relaxation
13.	Ammonical Nitrogen	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	0.5	No Relaxation
14.	Iron	mg/L	0.12	0.11	0.26	0.21	0.33	0.15	0.21	0.23	0.3	No Relaxation
15.	COD	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	--	-
16.	BOD	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	--	-
17.	Dissolved Oxygen	mg/L	3.9	4.1	4.1	3.3	3.9	3.5	3.8	4	--	-

Sr. No.	Parameters	Unit	Versamedi (GW-1)	Borewell at Anjar (GW-2)	Nr. Shinai Lake (GW-3)	Morwadard (GW-4)	Galpadard (GW-5)	Mithi Rohar (GW-6)	Nr Ajpar (GW-7)	Borewell at Atanjhar (GW-8)	Limits as per IS 10500:2012	
											Desirable	Permissible
18.	Cyanide	mg/L	NIL								0.05	No Relaxation
19.	Color	Pt. Co. Scale/Hazen	<5	<5	<5	<5	<5	<5	<5	<5	5	15
20.	Flouride	mg/L	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	0.11	<0.1	1	1.5
21.	Phenolic Compound	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.001	0.002
22.	Boron	mg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.5	1
23.	Copper	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.05	1.5
24.	Manganese	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	0.3
25.	Zinc	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	15
26.	Arsenic	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.05
27.	Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.003	No Relaxation
28.	Total Chromium	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.05	No Relaxation
29.	Lead	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	No Relaxation
30.	Mercury	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.001	No Relaxation
31.	Nickel	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	No Relaxation
32.	Total Coliform	Present/Absent	Absent								Shall not be detectable in any 100 ml sample	
33.	<i>Escherichia. coli</i>	Present/Absent	Absent									

**Conclusion:**

The pH of ground water showed a variation in the range of 7.05 – 7.68. TDS levels varied in the range of 971 – 6911 mg/L. Total hardness varied in the range of 310 – 1020 mg/L. Alkalinity varied in the range of 140 – 460 mg/L. The conductivity levels varied in the range of 1.59 – 11.1 mS/cm. Coliform bacteria were measured as Total Coliform, and E.coli, these bacteria are absent in all samples.

## Locations of Surface Water Sampling Stations



## Details of Surface Water Monitoring Locations:

Sr. No.	Sampling Locations	Approx. Radial Distance from Project Site (KM)	Bearing W. R.T. Project Site
9.	Sang River Nr. Galpadar (SW-1)	3.77	ESE
10.	Sang River Nr. Anjar City (SW-2)	3.96	SW
11.	Varsamedi(SW-3)	3.50	NNE
12.	Paswadi Khara(SW-4)	4.17	N
13.	Shinai Lake(SW-5)	7.38	SSW
14.	Modvadar(SW-6)	7.40	NE
15.	Kidana Village(SW-7)	8.66	SSE
16.	Satapar (SW-8)	7.08	NNW

, SW= Surface water

Sr. No.	Parameters	Unit	Locations								Classification for inland surface water				
			Sang River Nr. Galpadar (SW-1)	Nr. Anjar City (SW-2)	Varsamedi (SW-3)	Paswadi Khara (SW-4)	Shinai Lake (SW-5)	Modvadar (SW-6)	Kidana Village (SW-7)	Satapar (SW-8)	A	B	C	D	E
1.	pH at 25 °C	pH Unit	7.21	6.91	6.66	7.17	7.39	7.03	7.44	7.86	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5
2.	Conductivity	mS/cm	3.01	0.97	1.35	2.15	3.19	1.23	1.33	2.62	NS	NS	NS	1000	2250
3.	Temperature	°C	25	25	25	24	26	27	24	27	NS	NS	NS	NS	NS
4.	TSS	mg/L	10.2	6.9	21.1	17.9	15.9	7.1	6.3	5.8	NS	NS	NS	NS	NS
5.	TDS	mg/L	1801	612	805	1272	2003	714	791	1536	500	NS	1500	NS	2100
6.	Total Alkalinity	mg/L	200	150	120	180	210	170	230	350	NS	NS	NS	NS	NS
7.	Total Hardness	mg/L	490	110	240	310	510	160	190	320	300	NS	NS	NS	NS
8.	Calcium	mg/L	100.2	19.2	30.5	56.1	132.3	23.3	27.3	84.2	NS	NS	NS	NS	NS
9.	Magnesium	mg/L	58.3	15.1	39.9	41.3	43.7	24.8	29.6	26.7	NS	NS	NS	NS	NS
10.	Chloride	mg/L	837.5	196	301.5	641.2	911	259	274	725	250	NS	600	NS	NS
11.	Sulphate	mg/L	512	78.4	151	212	601	91.7	131	318	400	NS	400	NS	1000
12.	Ammoniacal Nitrogen	mg/L	<1	<1.0	<1	<1	<1	<1	<1	<1	NS	NS	NS	NS	NS
13.	Iron	mg/L	0.23	0.41	0.54	0.11	0.44	0.15	0.24	0.61	0.3	NS	50	NS	NS
14.	COD	mg/L	7.4	<5	7.4	11	40.5	7.4	11	33.1	NS	NS	NS	NS	NS
15.	BOD	mg/L	<5	<5	<5	5.92	15.7	<5	<5	12.76	2	3	3	NS	NS
16.	Dissolved Oxygen	mg/L	5.3	5.1	5	5.2	5	4.9	5.3	4.8	6	5	4	4	NS
17.	Cyanide	mg/L	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NS	NS	NS	NS	NS
18.	Color	Pt. Co. Scale	<5	<5	<5	<5	<5	<5	<5	<5	NS	NS	NS	NS	NS
19.	Flouride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.5	1.5	1.5	NS	NS

Sr. No.	Parameters	Unit	Locations								Classification for inland surface water				
			Sang River Nr. Galpadar (SW-1)	Nr. Anjar City (SW-2)	Varsamedi (SW-3)	Paswadi Khara (SW-4)	Shinai Lake (SW-5)	Modvadar (SW-6)	Kidana Village (SW-7)	Satapar (SW-8)	A	B	C	D	E
20.	Phenolic Compound	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NS	NS	NS	NS	NS
21.	Boron	mg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	NS	NS	NS	2
22.	Copper	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025					
23.	Manganese	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	NS	NS	NS	NS
24.	Zinc	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	NS	15	NS	NS
25.	Arsenic	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	NS	NS	NS
26.	Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	NS	NS	NS
27.	Total Chromium	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS	NS	NS	NS	NS
28.	Lead	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	NS	0.1	NS	NS
29.	Mercury	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NS	NS	NS	NS	NS
30.	Nickel	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	NS	NS	NS
31.	Total Coliform	MPN/100 ml	6	4	27	21	17	2	11	8	50	500	5000	NS	NS
32.	<i>Escherichia coli</i>	MPN/100 ml	<2	<2	13	12	9	<2	6	<2	NS	NS	NS	NS	NS

**Conclusion:**

The pH of surface water showed a variation in the range of 6.66 – 7.86. TDS levels varied in the range of 612 – 2003 mg/L. Total hardness varied in the range of 110 – 510 mg/L. Alkalinity varied in the range of 120 – 350 mg/L. The conductivity levels varied in the range of 0.97 – 3.19 mS/cm. Coliform bacteria were measured as Total Coliform and varied in the range 2 to 27 MPN/100 ml sample, and E.coli, these bacteria are found at a maximum value of 13 MPN/100 ml for Versamedi to a minimum value of below detectable limit at 4 locations.

## **Executive Summary**

**for**

**Proposed Metallurgical Unit Steel TMT Rebars and Wire Rods manufacturing rolling mill, DRI Manufacturing plant along with Captive Power Plant consisting of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler facility**

**at**

**Survey No. 652/P-1, Welspun City, Village: Varsamedi,  
Taluka: Anjar, District Kutch, Gujarat**

**by**



**M/s. Anjar TMT Steel Private Limited**  
(A Subsidiary Company of Welspun Steels Ltd)

M/s. Anjar TMT Steel Private Limited (ATSPL) wants to set up a metallurgical unit comprising of Steel TMT Rebars and Wire Rods manufacturing rolling mill having capacity of 4,50,000 TPA (CTE and CTO obtained for 4,00,000 TPA), DRI Manufacturing plant consisting of 500 TPD, DRI kiln along with Captive Power Plant consisting of 25 MW turbine and 50 TPH steam from Waste Heat Recovery Boiler facility at Survey No. 652/P-1, Welspun City, Village: Varsamedi, Taluka: Anjar, District: Kutch, Gujarat. At the time of TOR application there was no construction activity at the site. At present facility for TMT manufacturing by taking hot billets from WSL is ready at site.

M/s. Anjar TMT Steel Private Limited having total 71592.00 m<sup>2</sup> land area. The unit has obtained consent to establish (CTE) from Gujarat Pollution Control Board (GPCB) to set up an industrial plant at Survey No. 653, 655 Welspun city, Kutch under section 25 of Water Act- 1914 and Section 21 of Air Act 1981 vide letter No GPCB/CCA-KUTCH-1832/ID-82601 dated 07.08.2021 for setting up of 4,00,000 TPA TMT Bar. The unit has proposed to purchase hot billet (raw material) from adjoining M/s Welspun Steel limited. The unit has further obtained the CCA consent order No. WH- 120111 issued vide letter No. GPCB/CCA-KUTCH-1832/ID-82601/679643 dated 02/08/2022.

Now, M/s. Anjar TMT Steel Private Limited (ATSPL) wants to set up a metallurgical unit comprising DRI, Sponge Iron, CPP in remaining 51342 m<sup>2</sup> area. The project activities are listed in serial No. 3 (a) and 1(d) of the schedule of EIA Notification, 2006 (Metallurgical Unit). It is categorized as category 'A' and needs the Environmental clearance from Ministry of Environment Forest and Climate Change.

M/s. Anjar TMT Steel Private Limited (ASPL) is a 100% subsidiary of Welspun Steels Ltd. (WSL). WSL was established in the year 2004. It manufactures BIS Certified Steel Billets and DRI which is an important element in manufacturing of TMT bars and Wire Rods. The plant is backed by Group Captive power plants thereby making the steel unit self-reliant for power and not dependent on grid power. WSL manufacturing facility is situated at Anjar, Gujarat which is well connected by Sea port of Kandla and Mundra for import of raw material like scrap, Coal and Iron ore. In addition to this it also offers advantage for direct export to nearby countries.

WSL is part of the Welspun Group which is an Indian multinational conglomerate, headquartered in Mumbai, India, whose core industries are steel, energy, and textiles is promoting this plant for Ironmaking. Welspun is a fully integrated player within the Line Pipes and Home Textiles sectors, with a significant presence in Infrastructure development, spanning Roads, Water and Oil & Gas. As a globally recognized industry leader, the group has a worldwide reach panning more than 50 countries, and employing over 26,000 people across geographies, ethnicities and cultures.

### Location of the Project Site and Surrounding Salient Features

The site is located at around distance of 5.0 km away from Anjar city in East direction. The nearest airport is situated at Kandla around 1.5 km in South-East direction from the project site. Location Map, Google Image, Photographs of Project Site and Detailed Layout Map of the project is shown in figure-2.1, figure-2.2, figure-2.3 and figure-2.4 respectively. A location detail of the site is given below. The surrounding salient features and Environmental Setting are given in table 2.1

- a) Location : Welspun City
- b) Plot/Survey No. : Survey No. 652/P-1
- c) Village : Varsamedi
- d) Tehsil/Taluka : Anjar
- e) District : Kutch
- f) State : Gujarat
- g) Co-ordinates (Center) : Lat.: 23° 6'51.48"N, Log.: 70° 5'13.58"E

### Detailed map of Kutch District Showing Project Location



**Google Image of Project Site for setting up DIR Plant, TMT Bar & CPP**



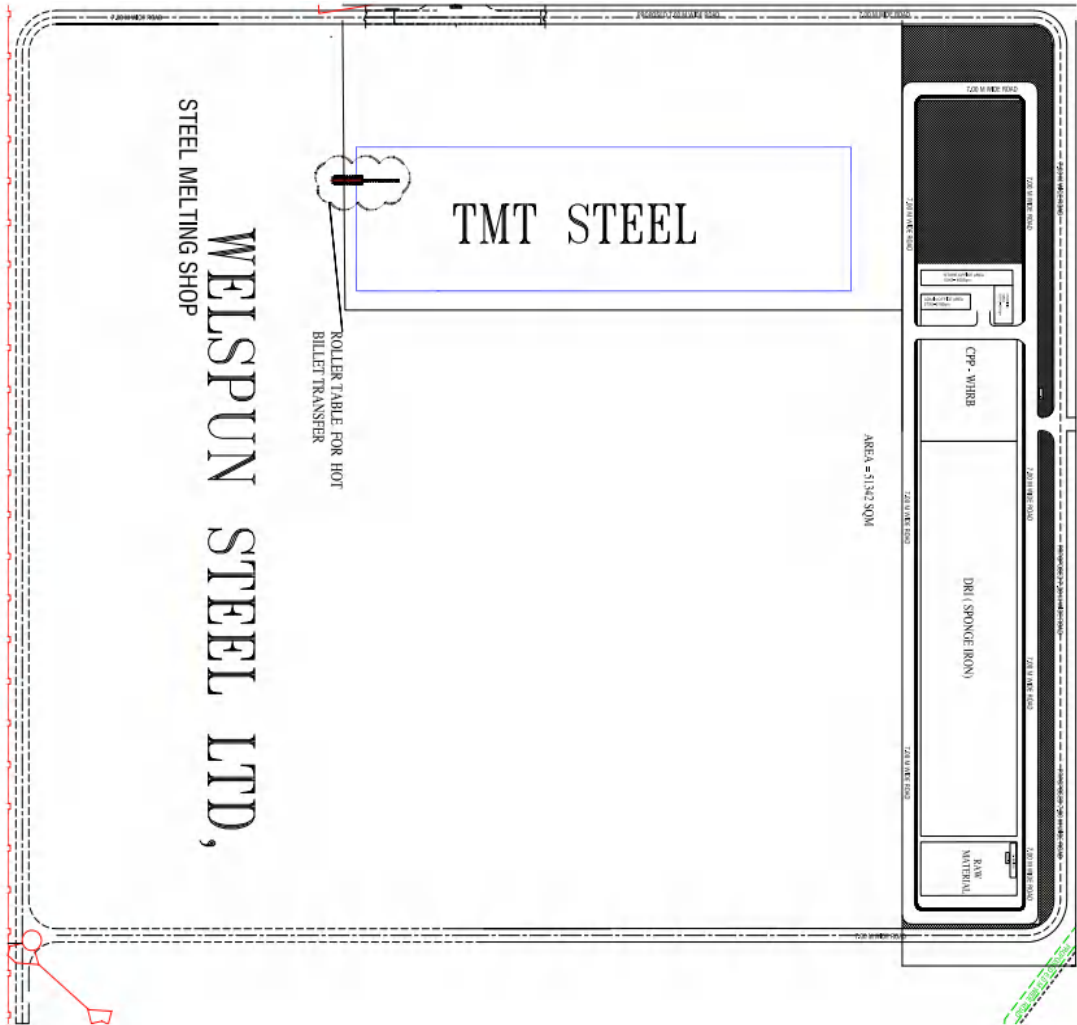
**Google Image of Project Site for setting up DIR Plant & CPP**



Photographs of Project Site



Plant Layout of Proposed Metallurgical Unit



**Surrounding Salient Features and Environmental Setting**

Sr. No.	Nearest Infrastructure Feature	Identity	Direction from Project Site
1	Nearest Village	Varsamedi	2.8 km in North-East direction
2	Nearest City/Town / Nearest Dist Headquarter	Anjar	5.0 km in West direction
3	Nearest National Highway	NH-341 NH-41	2.0 km in North direction 2.0 km in South direction
4	Nearest Railway Station	Adipur Anjar	4.0 km in South direction 5.0 km in West North West direction
5	Nearest Airport	Kandla	1.5 km in South-East direction
6	Nearest River /Water Body	Sang river	0.6 km in South direction
7	National Park / Reserve Forest, Biosphere Reserve	None	None within 10 km radius
8	Archeological site	None	None within 10 km radius
9	State boundary	None	None within 10 km radius
10	Defense installation	None	None within 10 km radius
11	Seismic Zone		Zone-V

**Details of Major Industries within study area (10 kms radius)**

Anjar is a town, a tehsil and a municipality in Kutch district in the state of Gujarat, India. This town has strong trade and social links with neighbouring Adipur, Bhuj, Gandhidham and Kandla. It is a town of historic importance, located in Southern Kutch, around 40 km away from one of the biggest ports in India-Kandla Port. Due to the presence of the GIDC (Gujarat Industrial Development Corporation) estate, trade and commerce is highly developed in Anjar. It is a base for salt, timber and food industries and there is also tremendous growth in number of engineering workshops, fabrication industry, chemical industry, etc. The list of major industries within study area given in following table.

**List of Major Industries within Study Area (10 KMs RADIUS)**

Sr. No.	Industry Name	Type	Distance and direction
1	Praj Industries Limited	One of leading suppliers of ethanol plant	9.0 km South-East
2	Ahir Salt Industries	Salt Manufacturer and Exporter of Various Grades of Salt	7.6 km South-East
3	Kutch Brine Chem Industries	Manufacturer, Exporter and Supplier of Refined Free Flow Iodized Salt and Industrial Salt	8.0 km South-East
4	Mehrawat industries	Manufacturer of plywood, Block board and flush door	7.0 km East
5	Plastofine Industries	Plastics Raw Materials & Plastic Articles Manufacturer	10.0 km North-East

Sr. No.	Industry Name	Type	Distance and direction
6	Ashapura Timber Industries	Manufacturer of white coal, Briquette, Block board frames, etc.	8.0 km South-East
7	Vijay Steel Industries	Manufacturer and Service Provider of Timber Plywood, Commission Agent, Wood, Pine Wood, etc.	8.0 km East
8	Vrudhi Industries	Exporter, Manufacturer, Service Provider, Distributor, Supplier, Trading Company of Packaging of Finished Pellets, wooden pellets, etc.	7.0 km South-East
9	Mahalaxmi Warehouse and Allied Industries	Unit has businesses in the Warehouses on Hire, Saw Mills, etc.	7.0 km East
10	J k Industries	Manufacturer of Block Woods	8.0 km South-East
11	Raylinks Industries	Manufacturer and Supplier of Non-Woven Bags, Non-Woven Packaging Bags, Non-Woven Printed Bags, etc.	5.5 km North-West
12	Shree Shiv Industries	Manufacturer of tanker, dumper body & diesel dispenser	5.0 km North-West
13	Royal Foam Industries	Manufacturer of Sofas, Curtains & Mattress	5.5 km East
14	Diamond Thermopack Ind.	Manufacturer of the wide spectrum PP Filter Cartridge, RO Spun Filter, etc.	4.5 km North-West
15	Shreenathji Cotton Industries	Manufacturer of high-quality & quantity cotton and also engaged in cotton ginning and pressing industry	6.0 km North-West
16	Gokul Agro Resources Ltd.	Edible Oil Processing	3.0 Km South
17	<p>The industry is subsidiary of Welspun Steels Ltd. hence surrounded by other units of Welspun group and other industries</p> <ol style="list-style-type: none"> <li>1. Welspun Steel Limited</li> <li>2. Welspun Corp Limited (WCL-1, 2, 3, 4, 5)</li> <li>3. Welspun India Limited</li> <li>4. Welspun DI pipe</li> <li>5. Welspun Metallics Limited</li> <li>6. WASCO</li> </ol>		

**Project Cost**

Approximately Cost of the proposed metallurgical project would be 470.0 Cr. This cost is inclusive of Land cost, Infrastructure Development Cost, Plant & Machinery Cost and other miscellaneous cost.

**Project Cost Break up**

Sr. No.	Particulars	Total (Crores)
1	Land	0.05
2	Site development	2.00
3	Building	51.78
4	Plant & Machinery	393.67
5	Others	22.50
<b>Total</b>		<b>470.00</b>

**Capital Cost and Recurring Cost for EPCM**

Sr. No.	Particulars	Amount in INR, Lakhs	
		One Time Installation Cost (Capital Cost)	Recurring Cost (per year)
1	Air Pollution Control System	800.00	80.00
2	Noise Control System	45.00	7.00
3	Green Belt Development	30.00	5.00
4	Environmental Monitoring	28.00	15.00
5	Water Pollution Control System	100.00	20.00
6	Occupational Health & Safety	25.00	10.00
7	Solid/Hazardous Waste Management	200.00	45.00
8	Rain Water Harvesting System	10.00	1.50
9	Fire Safety & Equipment	250.00	60.00
<b>Total</b>		<b>1488.00</b>	<b>243.50</b>

**Products**

The products and production capacity are given the following table.

Details of Existing products as per CTE vide letter No GPCB/CCA-KUTCH-1832/ID-82601 dated 07.08.2021 & CCA consent order No. WH- 120111, issued vide letter No. GPCB/CCA-KUTCH-1832/ID-82601/679643 dated 02/08/2022.

The unit has proposed to purchase hot billet (raw material) from adjoining M/s Welspun Steel limited. The unit has further obtained the CCA consent order No. WH- 120111 issued vide letter No. GPCB/CCA-KUTCH-1832/ID-82601/679643 dated 02/08/2022.

Sr. No.	Name of the Facility	Configuration	Capacity
1	TMT Bars	1 X 4,00,000 TPA	4,00,000 TPA

**Details of proposed products and production capacity after obtaining EC at this site**

Sr. No.	Name of the Facility	Existing		Proposed		Total	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	TMT Bars + Wire Rod (Carbon and Stainless Steel)	1 X 4,00,000 TPA	4,00,000 TPA	1 X 4,50,000 TPA	4,50,000 TPA	1 X 4,50,000 TPA	4,50,000 TPA
2	DRI (sponge Iron)	00	00	1 X 500 TPD	1,65,000 TPA	1 X 500 TPD	1,65,000 TPA
3	WHRB	00	00	1 x 50 TPH	50 TPH	1 x 50 TPH	50 TPH
4	Turbine	00	00	1 x 25 MW	25 MW	1 x 25 MW	25 MW

**Raw Material**

The raw material requirement for the proposed project is given in following table

Sr. No.	Raw Material	Proposed Quantity	Source	Mode of Transportation
1	Iron Ore / Pellet	3,00,000 MT	Karnataka/ Chhattisgarh /Orissa/Import	By Rail/Road/Sea
2	Non-Coking Coal	2,00,000 MT	Indonesia/South Africa	By Sea
3	Dolomite	20,000 MT	Rajasthan/Import	By Road/Sea
4	Billet	4,75,000 MT	WSL/other manufacturers	Roller Table/Road/Rail
5	Epoxy Resin	1,200 MT	Domestic Supplier	By Road

**Land**

Entire project having 71592.00 m<sup>2</sup> land area, M/s. Anjar TMT Steel Private Limited (ATSPL) obtained the CTE & CCA fresh for Hot rolling mill for manufacturing TMT Bar. Hot rolling mill is set up at approximately 20,250 m<sup>2</sup> area. Now, M/s. Anjar TMT Steel Private Limited (ATSPL) wants to set up a metallurgical unit at approximately 51,342 m<sup>2</sup> area. Land is already acquired for Proposed Project.

The land use breakup is given in following table

Sr. No.	Land Use	Area in m <sup>2</sup>
1	Admin building/office	216
2	Plant Facilities	13706.5
3	Storage Yard (Raw Material, Product and other material)	1470
4	Internal Roads	7196
5	Green belt	16943
6	Storage	400
7	Parking Area	200
8	Future expansion	40131.5
	<b>Total</b>	<b>51342.00</b>

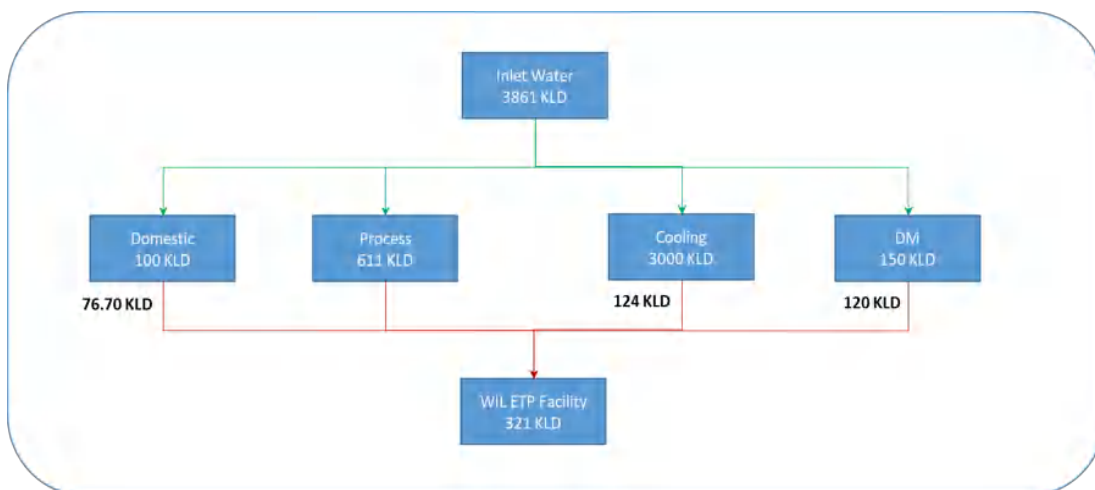
### Water

Total raw water consumption in the proposed unit will be approximately 3,861.00 m<sup>3</sup>/day (3,761.00 m<sup>3</sup>/day Industrial + 100.00 m<sup>3</sup>/day Domestic). The water will be sourced from sister concern unit M/s. Welspun India Limited from its 30 MLD Sewage treatment plant after recycling & reuse of municipal sewage generated from the nearby Municipalities.

The water requirement and waste water generation is given the following table

Sr. No.	Activity	Water Consumption KLD	Waste Water Generation
1	Domestic	100.00	77.00
2	Process	611.00	0.00
3	Cooling	3000.00	124.00
4	DM	150.00	120.00
<b>Total (1+2+3+4)</b>		<b>3861.00</b>	<b>321.00</b>

### Water Balance Diagram



### Treatment Scheme

The total wastewater generation from the proposed project will be 321.00 KLD (Domestic 77 KLD + Industrial 244 KLD). It will be sent to M/s. Welspun India Limited for treatment and reuse as WIL having ETP with capacity of 30 MLD, Physical, Chemical and Biological Oxidation plant, UF and RO system of having the capacity to recycle & reuse 23 MLD of wastewater.

### Fuel

Fuel requirement for the proposed project is given in following table:

Sr. No.	Types of Fuel	Quantity required	Source
1.	HSD (Only for start-up)	25 KL/year	Nearest petrol pump
2.	Coal	610 MT/Day	Import and from local market
3.	LDO (Note: LDO to be used only as alternate to Natural Gas)	4,400 /Year	Local market
4.	Natural Gas	60,00,000 Nm <sup>3</sup> /Year	Gujarat Gas Station

### Power

Approximately 12 MW power will be required which will be sourced from proposed captive power plant of 25 MW. Emergency power will be sourced from the sister company Welspun Captive Power Generation Limited.

### Manpower

The estimated manpower requirement for the proposed project will be approximately 470 nos. Preference will be given to local people based on their qualifications and requirements.

Sr no.	Category	Manpower
1.	Managerial	7
2.	Jr. Officer	30
3.	Staff	42
4.	Skilled	52
5.	Semi-skilled	95
6	Unskilled	244
	<b>Total</b>	<b>470</b>

## Sources of Air Pollution and Control Measures

### Details of Process Gas Emission Stacks

Stack No.	Stack Attached to	Stack Height (m)	APCM	Parameters	Permissible Limit
1	Pusher type Reheating furnace (25 TPH)	30	Adequate Stack height	PM SO <sub>2</sub> NO <sub>x</sub>	30 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup>
2	DRI with WHRB	65	ESP	PM SO <sub>2</sub> NO <sub>x</sub>	30 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup> 100 mg/Nm <sup>3</sup>
3	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
4	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
5	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
6	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
7	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
8	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
9	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>
10	DRI with bag filter	20	Adequate Stack height	PM	30 mg/Nm <sup>3</sup>

### Action plan to reduce the emission

The system proposed for air pollution control will positively provide an acceptable environment condition in the working areas and abate air pollution in the surrounding area of the plant. The technological equipment and processes have been selected with the above objectives. Depending on the quality of emissions from different sources, suitable air pollution control system shall be provided.

- The waste gases from DRI Kilns leaves at temperature about 850-900°C. These are passed through Dust Settling Chamber (DSC) where heavier particles settle down due to sudden decrease in velocity of gases. The flue gases are then passed through an After Burning Chamber (ABC) where un-burnt combustibles are burnt by blowing excess air. The temperature of the gases after burner chamber, at times, is controlled by water sprays. At present flue gases after ABC are passed through a down duct into evaporation cooler where its temperature flue gas is brought down before cleaning through ESP. The gas is let off into the atmosphere through stack via ID fan.
- The CEMS (Continuous Emission Monitoring System) will be installed for measurement of flue gas discharge and the pollutants concentration for stack emissions. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

- The adequate stack height with proper pollution control equipment will be installed for respective stacks prior to the commissioning of the plant.
- ESP and Bag filter will be installed with CPP to control flue gas emission less than 30 mg/Nm<sup>3</sup>
- Pressure drop measuring system will be installed to measure the pressure drop across the bag filters.
- Height of all the stacks shall be as per statutory requirement. All the stacks will have stack monitoring facility (SMF) consisting of sampling port-hole, platform and access ladder.
- Dust Extraction system will consist of suction hood followed by bag filter, ducts, extraction fans and stack of appropriate height.
- The low-NO<sub>x</sub> technology and other combustion modifications will be provided to reduce emissions of nitrogen oxides at Reheating Furnace.
- All air pollution control equipment shall be checked on half yearly basis, efficiency will be monitored and suitable repair/maintenance shall be carried out.
- Idle running of vehicles will be minimized during material loading / unloading operations.
- Vehicles will be periodically checked for pollutant emissions against stipulated norms.
- A good housekeeping and proper maintenance of ESP/Bag filters will be practiced to control emission in the industry.

#### **Fugitive Emission or Secondary Emissions**

Fugitive dust emissions are likely in the unloading areas, material transfer point, product separation area, etc. Fugitive emission in the material unloading area can be avoided by providing dust suppression system. Fugitive emission from material unloading operations, material transfer points will be controlled fully with total enclosure and all the transfer emission will be connected with extractor inlet point and will pass through a high efficiency Bag Filter before discharging into the atmosphere. All internal roads will be asphalted.

#### **Following is the source of fugitive emission**

- From the Loading and Unloading section of the plant
- During the movement of vehicle in the plant area
- From the activity in raw material storage, waste storage and product storage area
- From the transfer point of raw materials to the production area
- Raw material conveying between processing stages; and
- Product separation area

#### **Solid and Hazardous Waste Generation and its Disposal Method**

The sources of solid wastes, generation and its management are as given in the following table.

<b>Sr. No.</b>	<b>Name of The Waste</b>	<b>Schedule / Category</b>	<b>Quantity TPA</b>	<b>Method of Disposal</b>
1.	Used or Spent Oil	I-5.1	15 KL	Collection, Storage, Transportation, Disposal by reuse in Plant & Machinery as lubricant or sell it to authorized re-refiners/recycler.
2.	Mill scale	B1230	8400	Collection, Storage, Transportation, and dispatched to Sinter Plant or it

Sr. No.	Name of The Waste	Schedule / Category	Quantity TPA	Method of Disposal
				may be re-circulated to the steel making process of Steel Melt Shop.
3.	End Cuts and Cobble Cuts	-	16800	Dispose for remelting as steel scrap
4	KILN & WHRB FES dust (Fly Ash)	-	33000	Dolochar and fine dust generated from our proposed unit will be made into briquette and reused in sinter plant of our sister concern unit
5	Char & Dolochar	-	51200	
6	Bag Filter dust	-	28250	Saleable
7.	Wet Scrapper Sludge	-	14850	Sale to brick manufacturers

### Noise Pollution and Control Measures

The major noise generating areas are Rolling process, compressed air stations, etc.

- Various measures proposed to reduce noise pollution include reduction of noise at source, provision of acoustic lagging for the equipment and suction side silencers, selection of low noise equipment, isolation of noisy equipment from working personnel & use of Safety Ear Plugs.
- Main Sound is from Motors and during entry of hot bars into rolling Stands.
- In some areas where due to technological process, it is not feasible to bring down the noise level within acceptable limits of 85 dBA (at 1 m from source), personnel working in these areas will be provided with noise reduction aid such as ear muffs/ ear plugs and also the duration of exposure of the personnel will be limited as per the norms.

### Green Belt Development

Total 51342 m<sup>2</sup> land area is available at site; out of this area about 16943 m<sup>2</sup> (33 %) area will be developed as a greenbelt.