

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

Executive Summary

1.0 ki jingbatai ba kongsan

1.1 Jinglamphrang:

Shree Cement Limited (SCL) ka dei ka kompeni paidbah kaba la register hapoh ka Companies Act, 1956 ha ka 25 tarik October 1979. Ka kompeni ka trei ban pynmih clinker bad cement ha ki jaka treikam jong ka ha Beawar, Ras bad Nawalgarh ha Rajasthan; Balodabazar– Bhatapara ha Chhattisgarh; Sedam ha Karnataka; Guntur ha Andhra Pradesh; bad Ras Al Khaimah (RAK) ha United Arab Emirates (UAE).

SCL ka trei ruh da ki 12 tylli ki grinding unit kiba don ha Khushkhera, Suratgarh bad Jobner (Rajasthan); Roorkee (Uttarakhand); Aurangabad (Bihar); Bulandshahar bad Etah (Uttar Pradesh); Panipat (Haryana); Hansda (Jharkhand); Cuttack (Odisha); Patas (Maharashtra); bad Purulia (West Bengal).

Ha kane ka por, ka jingpynmih cement jong ka SCL ka long 62.8 million tonnes shi snem (MTPA). Ka kompeni ka don ka bor pynmih light ba long 1084.94 MW kaba kynthup 503.0 MW thermal power, 242.50 MW waste heat recovery system (WHRs), 283.14 MW solar power, bad 56.3 MW wind power.

1.1.1 Ka jingithuh ia katei ka projek:

La ai jingmut ban tei ka Integrated Cement Plant kaba don ka jingpynmih: Clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, RHPC & Composite Cement) CPP: 15 MW WHRS: 7 MW) bad DG Sets: 2500 KVA (1 × 2500 KVA ne 2 × 1000 KVA & 1 × 500 KVA ne 1 × 1000 KVA, 2 × 500 KVA & 2 × 250 KVA) Ha Khara Siang Lum Pyrshin, Daistong village, East Jaintia Hills, Meghalaya, da ka Shree Cement Ltd.

1.2 Jingjied ia ka jaka ban pyntreikam ia ka Projek:

Ka jaka ba la jied ka don ha East Jaintia Hills District, Meghalaya. Ka Narpuh Wildlife Sanctuary ka don ha ka jingjingai kum

ba 28.13 km ha ka bynta shathie shathie (SSW), kaba mut ba ym don jingktah ha kino kino ki jaka ba kyrpang halor ka mariang.

Ym don ki jaka Sah jingkynmaw (Archaeological Sites) lane ki jaka ba lah iada ban pynneh pynsah ia ka um (Wetland Reserves) hapoh 10 km na ka jaka ba la buh.

Ka jaka khappud (international border) bad Bangladesh ka jngai kumba 37 km na kata ka jaka ba la thmu ban buh ia ka projeck.

Ka shnong ba jan tam ka dei ka shnong Daistong, kaba don kumba 0.82 km ha ka bynta east-southeast (ESE).

La shem ba ka jaka ba la jied kam dei ha kino kino ki jaka ba kyrpang ha ka mariang lane ha ka archaeology, bad ka long kaba biang na ka bynta kane ka project.

1.3 Jingbatai shipor jong ka Projek.

Na ka bynta ka jingbatai shipor jong ka project, lah ban peit sha ka table ba la kdew ha syndah.

Table – 1.1: ka Jingbatai Bynrap Shaphang ka Natur, ka Jingheh bad ka Jinglong jong ka Projek

S. No.	Bynta	Details
1.	Jait jong ka Projek	Greenfield Projek
2.	Kyrteng jong ka Unit	Integrated Cement Plant (A Unit of Shree Cement Limited)

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S. No.	Bynta	Details	
3.	Size bad ka jingpynbeit jong ka Projeck	✓ Clinker: 0.95 million TPA ✓ Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3,RHPC & Composite Cement) ✓ CPP: 15 MW ✓ WHRS: 7 MW ✓ DG Sets: 2500 KVA (1 x 2500 KVA or 2 x 1000 KVA & 1 x 500 KVA or 1 x 1000 KVA, 2 x 500 KVA & 2 x 250 KVA) ✓ Project Site Area: 25.08 ha (61.95 Acres)	
4.	JAKA		
	Shnong	Daistong	
	Elaka	Elaka – NongkhliehDolloiship	
	District	East Jaintia Hills	
	State	Meghalaya	
5.	Ki bynta jong ka jaka projeck ha ka jinglong ryngkat ka mariang	Latitude	Longitude
		25° 21'01.823” N to 25° 20'59.918” N	92° 33'27.501” E to 92° 33'27.104” E
	Toposheet No.	Core & Buffer Zone: 83C/11 & 83C/7	
6.	Jingbatai shaphang ka projek		
	Ka jinglut ka ba kongsan jong ka project	Rs. 1264 Crores	
	Ka jinglut na ka bynta ki seinjam ban pynneh pynsah ia ka Mariang	● Jinglut ka ba heh: Rs. 23.5 klur ● Ka jinglut kaba wan mih man ka snem (recurring Cost): Rs. 0.30 klur/snem	
7.	Jing donkam ba kongsan jong kaProjeck		
	Jaka	Ka jaka ba donkam baroh	25.08 ha (61.95 Acres)
		Greenbelt Development & Plantation	Approx. 8.27 ha (20.44 Acre) (~33% of total plant area)
	Ka jingdonkam ia ka Um(KLD)	600 KLD (kynthup ruh ka jingdonkam ia ka um ka bakhuid : 515 KLD & Um ba la pyndonkam biang na STP bad RO Rejects: 85 KLD). Tynrai: Ka jingdonkam um kan pynbiang da ka um shnong kaba mih na madan (ground water) bad da ki um slap/ka um na ki wah (surface water bodies) kiba don marjan, hadien ba la ioh ïa ka jingbit na ka sorkar jylla kaba dei peit.	
	Ka jingdonkam bor ding(MW)	Ka Jingdonkam Bor Ding Rongbuh: 18 MW	
	❖ Ka jingpyndonkam bording man ka ton Clinker: 48.2 Kwh		

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S. No.	Bynta	Details
		❖ Ka jingpyndonkam bording man ka ton ha ka Cement Grinding: ● OPC, PPC, RHPC, LC3 & SRC Cement: 25 haduh 30 Kwh ● PSC Cement: 28 haduh 51 Kwh ● Composite Cement: 28 haduh 36 Kwh Ka jingpyndonkam bording da ka bor jingshit (Thermal Energy) jong ka Clinker: 670 Kcal / Kg ● Tynrai: Ka bor kan wan na ka Captive Power Plant kaba la thmu ban tei, WHRS, ka bording na ka State Grid bad ki DG sets (na bynta ka jingpynbiang lada don jingbym biang).
8.	Jing donkam briew ban trei	
	Ka bynta ban pyntreikam(ka jing tei/ jingshna)	Permanent: 100 Nos.
		Contractual: 500 Nos.
	Ka por treikam	Permanent: 150 Nos.
		Contractual: 300 Nos.
9.	Ki jaka ba don marjan bad ka projeck (Project Site Vicinity Details)	
	Ka shnong ba kham marjan	Shnong Daistong (~1.43 km in ESE direction)
	Ka sor ba kham marjan	Mutong (~5.51 km in ESE direction)
	U surok bah ba marjan (National /State Highway)	NH- 6 (~18.93 km in SW direction)
	Ka Station Rel ba kham marjan	Ditokcherra Railway station (~36.90 km in SE direction)
	Ka Airport ba kham marjan	Silchar Airport (~63.35 km in SE direction) Guwahati Airport (~128.21 km in NW direction)
	Ki wah ba kham marjan	River (Wah Chyrmit) about 4.48 NW Direction. Pal Lam Kankalang River about 8.50 NE Direction
	National Park, Wildlife Sanctuary, Tiger/ Elephant Reserve,	Ym don ki National Park, Wildlife Sanctuary, Tiger/ Elephant Reserve, ha poh ka 10 km radius jong ka jaka ba la wad bniah.

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S. No.	Bynta	Details
	Eco-Sensitive Zone etc.	
	Ki khlaw ba lah iada (Reserved/ Protected Forest) hapoh 10 km radius	Ym don Reserved/ Protected Forest hapoh 10 km ha ka jaka bal ah 3wad bniah .Except,Saipung Reserved Forest (~6.35 in SE direction)
	Ki CPA/SPA/OPA kiba don ha ka thain ka study	Ymdon CPA/SPA hapoh ka 10 km radius ka jaka wad bniah.
	Jaka sah jingkynmaw (Archaeological site)	Ym don hapoh ka 10 km radius
	Ka bynta ba jur ka jingma na u Jumai (Seismic Zone)	Zone - V as per IS: 1893 (Part-I): 2002

1.4 Ki jing don kam ba kongsan jong ka tei ka projek

1.4.1ki martynrai ki ba donkam: Ki martynrai kiba kongsan kiba donkam na ka bynta ka jingpynmih Clinker bad Cement ki long mawshun, Iron Ore, Bauxite, Gypsum (Mineral, Synthetic, Chemical & Imported), Fly ash bad Slag.

Ki jingtip bniah shaphang ka jingdonkam jong ki mar tynrai badon kam (raw material), ka jaka ban wanrah, ka jngjngai bad ka rukom kit ia ki la batai ha Table 11.2 (a & b).

Table No. 1.2

S. No.	Kyrteng jong ki mar tynrai badon kam	Basis	Jingbun (Million TPA)	Tynrai	Rukom kit ia ki mar.
1.	Limestone	1.5 T/T of Clinker	1.43	Par maw ba la buh kyrpang Captive Mine	~ 0.1 km; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom
2.	Iron Ore (Laterite)	0.015 T/ T of Clinker	0.014	Jaka ba marjan	~60 km; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom
3.	Bauxite	0.044 T/ T of Clinker	0.042	Jaka ba mrjan	jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom.
4.	Gypsum	0.07 T / T of Cement	0.06	Ba wan rah na Bhutan	~60 km; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom.
5.	Fly ash	0.35 T/T of Cement	0.34	Jaka ba marjan	jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom
6.	Slag	0.55 T/T of Cement	0.54	Jaka ba marjan	jingiaid ryngkat na kiwei pat ki liang ba ar ne lai

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S. No.	Kyrteng jong ki mar tynrai badon kam	Basis	Jingbun (Million TPA)	Tynrai	Rukom kit ia ki mar.
					rukom.
7.	Dolochar	-	0.095	Marjan Spong Iron Plant	~ 60 km ; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom.
8.	Petcock as feed Stock	-	0.095	--	~ 60 km ; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom.
9.	Biomass	-	0.56	Marjan ki jaka rep	~ 60 km ; jingiaid ryngkat na kiwei pat ki liang ba ar ne lai rukom.

Table No 1.2 (b)

Jingdonkam (in Million TPA) naka bynta ban pynmih cement (OPC/PPC/Composite Cement/PSC/RHPC/LC3/SRC)						
S. No.	Mar tynrai (Raw Material)	OPC / RHPC/ SRC	PPC	PSC	L C 3	Cement kaba pynlong na ki bynta bapher ba pher
1.	Clinker	0.92	0.57	0.38	0.50	0.38
2.	Gypsum	0.07	0.07	0.07	0.07	0.07
3.	Fly ash	0.00	0.35	0.00	-	0.35
4.	Slag	0.00	0.00	0.00	-	-
5.	Calcined Clay	-	-	-	0.33	-
6.	Limestone	-	-	-	0.10	-
	Total Capacity (MTPA)	0.99	0.99	0.99	0.99	0.99

Note:
Ka Clinker kan phah sha ki bynta pynkhreh (grinding units) jong ka kompani, sha ka iew (market sale), bad kan ioh ruh na shabar (na kiwei pat ki karkhana SCL), lada ka jingtreikam ka Clinkerization plant ka sangeh ne lada ka don ka jingduna ha

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ka jingdon jong ka Clinker.

Ka jingpynmih Cement kan long tang 0.99 million TPA, kata na ki jingjied bapher kum ka OPC / RHPC / SRC / LC3 / PPC / PSC / Composite Cement.

1.4.2 Fuel Requirement

Ki Jingdonkam Dewbil / Dewbil pynmih (Fuel/Feed Stock Requirement)

Ki jingtip shaphang ka jingdonkam jong ka Dewbil/Fuel bad Feed Stock, ka jaka la wanrah, ka jingjingai bad ka rukom kit ia ki, na ka bynta ka Proposed Integrated Cement Plant, la batai ha Table – 1.3.

Table – 1.3: Ki Jingdonkam Dewbil na ka bynta ka Proposed Integrated Cement Plant

S. No.	Kyrteng jong Feed Stock	Jingbun (Million TPA)	Tynrai	Calorific Value (Kcal/kg)	Ash (in %)	Sulphur (in %)	Jing jngai bad rukom kit
Na ka bynta ka Karkhana Sement							
1.	Indian & Imported Coal	0.36	Indigenous Coal: Ki par dewbil ba jan	4200-4800	30-35	0.4-0.5	Local Area ~20 to 200 km by Road
			Imported Coal: USA, South Africa, Australia and Indonesia through Calcutta Port / Calcutta or Paradeep or Vizag etc.	5000-5800	6-10	0.5-0.6	Calcutta Port / Calcutta or Paradeep or Vizag – ~650 km by Road.
2.	Petcoke as feed stock	0.24	Petcoke USA / Saudi Arabia / Turkey / Canada through Calcutta Port / Calcutta or Paradeep or Vizag etc.	7800-8300	0.5-2	6-9	Calcutta Port / Calcutta or Paradeep or Vizag – ~650 km by Road.
3.	Dolochar	0.24	Kharkhana Sponge Iron ba jan	2500-2700	68.18	0.32	~100 to 300 km by Road
4.	Biomass	0.30	Ki lyngkha rep ba jan	2300-2500	5- 29	0.15 - 0.22	~100 km by Road
For Captive Power Plant							

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1	100% Indian Coal	0.225	Indigenous Coal: Nearby Coal Mines	4200-4800	30-35	0.4-0.5	Local Area ~20 to 200 km by Road
2	100% Imported Coal	0.12	USA, South Africa, Australia and Indonesia through Calcutta Port / Calcutta or Paradeep or Vizag Port etc.	5000-5800	6-10	0.5-0.6	Calcutta Port / Calcutta or Paradeep or Vizag ~650 km by Road
3	Biomass	0.26	Nearby Agriculture fields	2300-2500	5- 29	0.15 - 0.22	~100 km by Road

1.4.3 kiwei pat ki jingdonkam ba kongsan:

Ka jingdonkam um baroh sha ka jingtei thym mai kan long 600 KLD; bad yn shim na ka Wah Dihang / Um shadkaba (Ground Water) / Um na ki Mine Pit, da kaba peit katkum ka jingdon bad ka jinglah ban ioh.

Table – 1.4: jingdonkam Um

S. No.	Jingbatai	Ka jingdonkam Um Baroh KLD)		Remarks
		Um ba khuid (KLD)	Ka um balah pyndonkam biang (RO Reject/ Domestic waste) (KLD)	
A.	Ki Jingdonkam ha ka Rukom Shna Siment			
	Cement Mill Spray	120		70 KLD Ka um ba mih na ka Cooling water blow down & RO Reject Water yn pyndonkam ha Mill Spray, Stackers & Reclaimer.
	Cooling Water	60		
	Stackers & Reclaimer	10		
	Raw Mill Section	10		
	Coal Mill	5		
B.	WHRs	40	15	
C.	CPP	160	50	

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D.	Jingdonkam Um ban dih & jingpyndonkam ha iing treikam jong ka Plant	25	05	Ka um jaboh (sewage water) yn pynkhuid ha STP & 15 KLD ka um kaba la pynkhuid na STP yn pyndonkam na ka bynta ka greenbelt & ka jingthung dieng / jingpynkyndew (plantation development).
E.	Ka jingdonkam um na ka bynta ka plantation & Greenbelt	85	15	
Grand Total (A + B + C + D + E)		515	85	515 KLD ka Raw Water +85KLD Recycled water (na STP Treated, Blowdown & RO Reject)
Note: Ka jingdonkam um baroh ka long 600 KLD {kynthup ka Fresh Water Requirement 515 KLD & ka Recycled Water na STP & RO Rejects 85 KLD}.				

Ka jingdonkam bor ding jong ka jaka tih dewia kan long 18 MW; bad kan sa ioh na ka Captive Thermal Power Plant (15 MW) & ka Waste Heat Recovery System (7 MW), na ka State Grid bad na ki DG Sets (na ka bynta ka jingiarap ha ka por mih jingeh).

1.5 Ka jingbatai ia ka rukom treikam:

Ka jingpynmih dewia(cement) kan long da ka rukom dry process technology bad kan kynthup ia ki bynta trei-kam kumne harum:

- Ka jingpynkhylllem (crushing) ia u limestone ha ka jaka tih maw.
- Ka jingpynphar (pre-blending) ia u limestone uba la pynkhylllem da u Stacker & Reclaimer.
- Ka jingtylliat ryngkat ka jing pynrkhiang (grinding-cum-drying) ia ki raw materials bad Coal/ Petcoke/Dolochar/ Biomass ha ka VRM.
- Ka jingpynjanai (homogenization) ia ka raw meal ha ka blending silo.
- Ka jingpynlong clinker (clinkerization) ia ka raw meal ha ka rotary kiln ryngkat ka preheater, calciner bad cooler.
- Ka jingtylliat, ka jaka buh mar bad ka jing pynsong ia ka dewbilat (cement).
- Ka jingkit ia u clinker bad cement lyngba ki surok (road networks).

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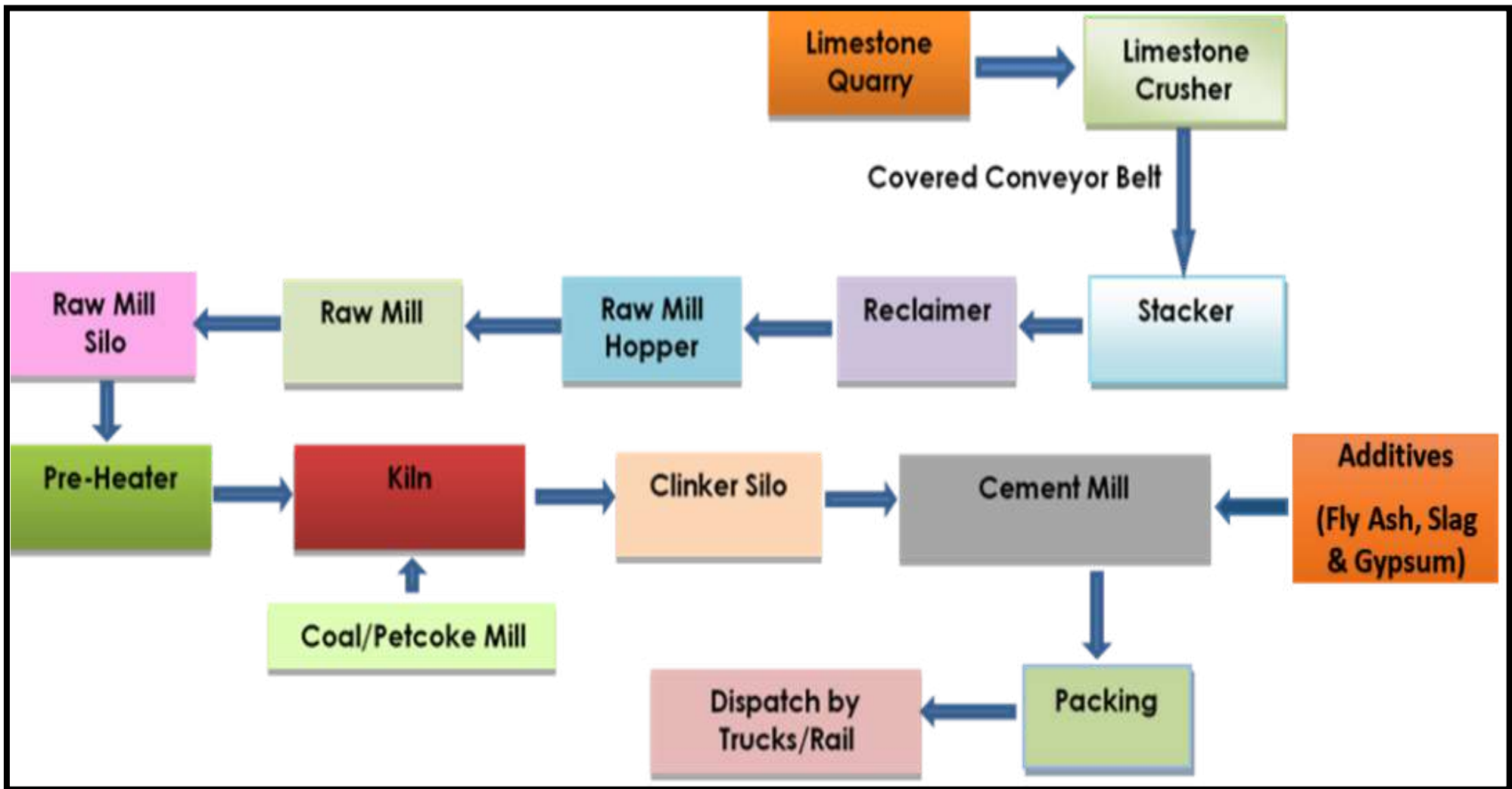


Figure 1.1

Jingbatai shaphang ka rukom treikam (technology description) jong ka karkhana cement (cement plant)

- ✓ Limestone Crushing: Ka mawshun kaba wan kum ka ROM la pynrit bad pynkhuid da ki dewbilat wobbler bad crusher haduh ba ka riehteng(size) duna ïa ka 90 mm, bad nangta la phah ban buh pynlang bad pynjanai.
- ✓ Pre-Blending: Ka jingkhleh-lang shwa la u mawshun ba la tylliat (crushed limestone) la pynlong mar kumjuh (homogenized) da kaba pyndonkam da ki kor stacker bad reclaimer
- ✓ Raw Material & Fuel Grinding (VRM: la u mawshun lem bad ki mar pynbeit (corrective materials) la tylliat bad pynrkhiang ha ka VRM (Vertical Roller Mill) da kaba pyndonkam da ka lyer shit na ka preheater. la u dewiong/petcoke la tylliat ha ka kor tylliat roll crusher bad sa tylliat biang ha ka ball mill/VRM. Kiwei pat ki jait umpluh (alternative fuels) kum ki nuit ba ma (hazardous waste), dolochar, bad ki mar long-ry-long-ja (biomass) lah ban pyndonkam.
- ✓ Raw Meal Homogenization: Ki tiar kiba la tyllun la buh ha ki silos bad la pynjanai stet ha ki jaka tylliat kiba kylluid (continuous blending silos).
- ✓ Clinkerization: Ka preheater bad ka calciner ki pynthikna ia ka jingkyntiew jingshit ba donbok bad ka jingpynlong dewbilat shiteng (partial calcination). Ka jingpynlong clinker kaba khatduh ka jia ha ka jaka thang (burning zone) jong ka lawar
- ✓ Clinker Cooling: Ka clinker kaba don ka jingshit kumba 1000° C la pynpjah ia ka dewbilat daka (grate cooler) bad la phah pat sha ki silos ban buh.
- ✓ Cement Grinding & Packing: la u clinker la tylliat ha ka kor tylliat dewbilat (cement mill) da kaba pyndonkam da ka lyer shit na ka HAG (kaba pyndonkam da u dewiong/dolochar/biomass). la ka dewbilat kaba khatduh la buh tyndung ha ki silos bad pynsdong lyngba ki kor thew/pack rotary electronic.
- ✓ Transport: Ka cement bad clinker la phah lyngba ka surokbah NH-6 kum ka lad kit kaba kongsan.
- ✓ NOx Reduction (SCR): Ki dewbilat bthei kiba pynrit ïa ka NOx, ki jingpynkylla ha ka calciner, ka jingpeitngor ha ka jaka bthei kaba pynduna oksijen, bad ka jingpynjanai ïa ka jingbthei ki pynrit nyingkong ïa ka jingmih NOx ha ka jingtreikam shapoh.

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- ✓ Alternative Fuel Co-Processing: Ki jaboh kiba ma bad kiba lait na ka jingma la lathang lang ha ka jingshit kaba poi haduh 1400° Celsius. Kane ka pynduna shibun ia ka jingpyndonkam dewiong bad ka pynduh lut ia ki jaboh kiba dang sah.Ka rukom treikam jong ka AFR ka kynthup ia ki kor thep, ki kor rah mar, ki kor kit mar, ki jingkhang iada bad kiwei kiwei

1.6 ka jingbatai shaphang ka Mariang.

La leh ia ka Baseline ha ka por **Summer (Lber haduh Jymmang 2025).**

1.6.1 Ka Jinglong Jingkhuid Jong Ka Lyer (Air Environment)

Ia ka jinglong jong ka lyer sawdong ba tynrai (baseline ambient air quality) la bishar bniah ha phra tylli ki jaka hapoh ka jinglong jingman ka jingthew kaba 10 km ha ki bnai Lber 2025 shaduh Jymmang 2025. Ka jingdon jong ka PM₁₀ ka long naduh 32.48 haduh 63.21 µg/m³ (98th percentile: 60.31– 62.81 µg/m³), katba ka jingdon jong ka PM_{2.5} ka long naduh 14.65 haduh 34.56 µg/m³ (98th percentile: 30.38– 34.42 µg/m³). Ki jingpynjaboh ba long-ha-dpei (gaseous pollutants) ki long kiba duna eh, da ka SO₂ kaba long hapdeng 2.29– 4.92 µg/m³ bad ka NO₂ hapdeng 3.11– 5.98 µg/m³, baroh kiba long hapoh eh jong ki kyndon NAAQS. Baroh kiwei ki parameter bishar jinglong lyer (kynthup CO, O₃, NH₃, Pb, Ni, As, bad Benzene) ki long ruh hapoh bha jong ki National Ambient Air Quality Standards (NAAQS), kaba pynskhem ia ka jingiaid beit ryntih hi baroh kawei.

1.6.2 Um Mariang

Ka Jinglong Jingkhuid jong ka Umpohkhyndew(Groundwater Quality)

Ki sample jong ka um kiba la lum ha u Lber– Jymmang 2025 na **Saipung PHC, St. Joseph’ s Church (Khahnar), Tangnub Presbyterian Church (Lumpdeng), bad Shnongrim playground** ki pyni ba ka pH ka long **khyndiat acid** (5.32– 5.90).

Kiwei ki parameter baroh ki long hapoh ki kyndon jong ka **IS 10500**

- Chlorides: 34.2– 38.2 mg/L
-
- Sulphate: 18.2– 25.2 mg/L
- Nitrate: 8.1– 9.8 mg/L
- Calcium: 42.5– 48.2 mg/L
- Magnesium: 8.4– 9.2 mg/L
- Iron: <0.05 mg/L

Ka um ka biang ban pyndonkam ia ki mrad, hynrei bunsien kam dei kaba biang ban dih da ki briew namar ka jinglong acid jong ka. Ka projek ba la thmu kan long ka zero-discharge system, kaba pyntikna ba ym don kano kano ka jingktah ne jingjia ia ki um ha ki jaka ba don sawdong.

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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Ka SCL kan ai jingkyrshan ïa ki nong shong shnong da kaba pyntreikam ïa ki lad ai um bam umdih da ka teknologia desalination hapoh ka EMP/SEDP.

1.6.3 Ka Jinglong Jingkhuid jong ka Um Bam (Surface Water Quality)
Ka um bam kaba la shim sample ha ka por baseline ka pyni ba:

- pH: 5.4– 5.8
- DO: 6.8– 7.6 mg/L
- BOD: 4.2– 4.8 mg/L
- Chlorides: 18.12– 20.30 mg/L
- Sulphates: 24.40– 24.70 mg/L
- Total Coliform: 44– 46 MPN/100 ml

Bun ki parameter ki iahap bad ki kyndon jong ka CPCB Category A, kaba pyni ba ka um ka long kaba biang ban pyndonkam kum ka um bam um dih hadien ba la pynbeit da ka jingtrei (treatment).

1.6.4 Ka jingmiat Mariang(Noise Environment)

Ka jingpeit bniah ïa ka jingmiat kaba la leh ha u Lber– Jymmang 2025 ha san tylli ki jaka pyni ba:

- Kajing miat ha ka sngi ka long hapdeng **48.50– 52.90 dB(A)**,
- Katba ha ka por mynmiet ka long hapdeng **38.10– 42.60 dB(A)**.

Kine baroh ki jaka ki long kiba iahap bad ki kyndon jong ka **CPCB** na ka bynta ki jaka sah (residential) bad ki *silence zones*.

Ka jingsawa sawdong ka mih na ka jingiaid kali ha ka thain, ki kam jong ki paidbah, bad ki jaka mariang sawdong, kaba pyni ia ka jinglong jingsawa kaba jai-jai

1.6.5 khyndew mariang

Ka jingshim khyndew (soil sampling) ha ka por thew tynrai ka pyni ia ka jinglong ba mar kumjuh jong ka khyndew – naduh ka jait shyiap-lwet (sandy-loam) sha ka jait lwot-dei-dewbyrtha (loamy-clay)– ryngkat ka jingdon ki mar jingriew (nutrient content) kiba biang

- pH: 7.11– 7.40
- Organic Carbon: 0.86– 1.20%
- Phosphorus: 54.32– 66.01 kg/ha
- Potassium: 162.9– 215.58 kg/ha
- Magnesium: 472.33– 809.51 mg/kg
- Calcium: 3508.9– 3952.7 mg/kg

Ki khyndew ki don jingbun ki jingkha (nutrients) bad ki long kiba biang na ka bynta ka jingthung jingtep. Ka jinglong khyndiat alkaline ka dei ka jinglong ba ju don ha kane ka thain. Ka SCL kan pyntreikam ïa ki lad pynneh-pynsah ïa ka khyndew (soil conservation) bad ka jingthung dieng-jingsah ba kynthup ha ka EMP.

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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1.6.6 Ka jingstad shaphang ka mariang ka kren shaphang ka jingbun jingroi ki jaid jingthaw ba im ha ka mariang. (Ecology & Biodiversity (EB))

Ki jingbishar ia ka jinglong jingman ka mariang (ecological surveys) ba la leh ha ki bnai Lber-Jymmang 2025 ki pyni ba ka jaka thew ka kynthup ia ka khyndew rep, ki skrub, ki phlang, bad ki jaka khlaw. Ym don ki jaka ba la iada ne ki jaka ba long ecological-sensitive hapoh 10 km. Ki jait jingthaw ba la thew ki long kiba don hi bad kim dei kiba la pynma.

Ka jingktah ia ka Mariang jingim bad ki lad Tehlakam (Ecological Impact & Mitigation)

Ki jingktah kiba lah ban jia ia ka jingbun jait jingim na ka jingtei lang ka karkhana shun-cement bad ka jaka pynmih bor ding ki long kum ka jingpynkhih ia ki jaka sah jong ki jingim, ka jingtep sboh-bleith bad ka shan shor. Ki lad tehlakam kynthup (Mitigation includes)

- Ka Phang Pynneh-Pynsah ia ki Mrad Khlaw (WLCP)
- ka jingthung dieng sawdong(greenbelt) 33% da ki dieng tynrai jong ka thain
- Ki kor jingiada na ka jingpynjaboh ba stad tam (advanced pollution control systems) (ESP, Bag Filters, FGD, Low-NOx) (Advanced pollution protection machines/systems)
- Ki jingkhang jingsawa ba shngain na ka bynta ki mrad khlaw
- Ka jingpyniaid hok ia u sboh-ding, ka jingsumar ia ka mariang bad ka jingpyndonkam pat ia ka um khlem da noh eiei (ZLD)
- Ka jingpeitngor ia ka mariang jingim kaba iai bteng bad ka jingai kaiphod shi sien shi snem

1.6.7 ka jinglong jingman ka imlang sahang bad ka ioh ka kot ha ka mariang(Socio-Economic Environment)

Ka Jingpeit Jingialang ia ki Jingtrei Jong Kiwei Kiwei (Socio-economic Surveys)

Ki jingbishar ia ka jinglong ka imlang sahang bad ka ioh ka kot (socio-economic surveys) ba la leh ha ki bnai Lber-Jymmang 2025 ki pyni ba ka jingim ki briew nongkyndong ka shong ha ka rep ka riang, ka khaii pateng rit, bad ka kam bylla. Ka thain ka don ki jingtei tynrai (basic infrastructure) kum ki skul, ki jaka sumar pang, bad ki lynti syngkien.

Ia ka project la khmih lynti ban pynmih kam ha ka thain, ban kyntiew ia ki sap ki jingstad, ban kyrshan ia ka roi ka par jong ka imlang sahang, bad ban pynbha ia ki jingtei lyngba ki jingpyrshang CSR/SEDP.

1.7 Ki jingktah balah ban don ha ka Mariang bad jingthew ban pynduna

1.7.1 Ki jingktah ha ka bynta ba shana bad ki jingthew ban pynduna

Table1.5 : Ka jingpyndonkam ia ka jaka bad ka mariang ha ka bynta ba shna

Kaliang	Ka jingktah ha ka por ba shna	Jingdonkam	Ki jingthew ban pynduna
Kadur kajaka	Jingpynwit ba rit namar ka jingpynkhuid jaka bad ka jingpynmadan	Rit	Pynneh ia ki jinglong mariang; khanglad ia ka jingot ne tih khyndew

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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Kaliang	Ka jingktah ha ka por ba shna	Jingdonkam	Ki jingthew ban pynduna
Ka Jingpyndonkam ïa ka Khyndew	Jingduh shipor ïa ki jingtrei jingrep hapoh ka jaka treikam	Jingpdeng	Pynphai biang ïa u dewbyrsieh; pynioh biang ïa ki jaka jyrngam hadien ba la dep shna
Khyndew(Soil)	Jingpynwit ïa ka khyndew, jingtynjuh, jingtwa khyndew	Jing rit - jingpdeng	Jingot ba la khyrwah; jingpynphai biang ïa ka khyndew; ki kynroh shipor
Hydrology (Ka Jingpule Um)	Ym don jingktah beit (ym don jaka um hapoh u pud u sam ka jaka)	Insignificant (Khlem Jingmut)	lada ïa ka jaka ba don um ha shatei lam mihngi; pynneh ïa ka jaka thep um
Dust (PM) (U Pui Pui)	Jinglong shibun u pui pui shipor na ki jingtrei khyndew, jingiaid ki kali	Jingpdeng	Jing theh um, jingtap ïa ki mar bal ah buh; jingkhanglad ïa ka jingstet
Vehicle Emissions (Ki Jingpynmih na Kali)	Jingkiew shipor ïa ka NOX, SO2, CO, PM na ki kor ki bor	Jingrit	Pyndonkam ïa ki kali ba don PUC-certified; jingmaramori ïa ki tiar
Noise(jingsawa)	Jingsawa ba jur na ki kor shna kali & ki kali	Jingrit – jingpdeng	Pyndonkam ïa ki tiar pynduna jingsawa; khanglad ïa ka jingtrei mynmiet; PPE na ki nongtrei

Table 1.6: Ka Jinglong jong ka Lyer - Ka bynta ba shna

Tynrai	Jingktah	Duration/Extent (Ka Por/Ka Jingiar)	Mitigation(jingpynduna)
Earthwork, Excavation (Jingtrei Khyndew, Jingtih)	High fugitive dust (PM) (Shibun u pui pui ba her (PM))	Short-term, Localized (Shipor, Jingkhanglad jaka)	Jing theh um ; jingot ba la bynta
Material Movement (Ka Jingpynkynriah Mar)	Dust release from loading/unloading (Jingpynmih pui pui na ka jingthep/jingpynhiar)	Short-term (Shipor)	Covered trucks; avoid overloading (Ki trok ba la tap; kiar na ka jingthep palat)
Vehicle Exhaust (Ka tdem Kali)	Increase in NOx, SO ₂ , CO, HC (Jingkiew ha ka NOx, SO2, CO, HC)	Short-term (Shipor)	(Ki kali PUC; jingpynbha kali ba dei por)
Stockpiles (Ki ïing Jingtei/Jinglum Mar)	Wind-blown dust (Jingpui pui da ka lyer)	Local (Ha ka jaka)	(Tap ïa ki jinglum mar; pynskhem ïa ki jingjrong)
Construction Debris Handling (Ka Jingpyniaid	Dust and particulate release (Jingpynmih pui pui bad ki	Local (Ha ka jaka)	Covered disposal; designated waste areas (Jingbret ba la tap; ki jaka bret

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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Tynrai	Jingktah	Duration/Extent (Ka Por/Ka Jingiar)	Mitigation(jingpynduna)
ia ki Sniang Jingtrei Shna)	jingpynwit rit)		niut ba la buh kyrpang)

1.7.2 JINGKTAH & JINGTHEW BAN PYNDUNA HA KA BYNTA BA PYNIAID KAM

Table 1.7: Ka Jingpyndonkam ia ka Jaka bad ka Mariang - Ka Bynta ba Pyniaid Kam

Ka Liang	Ki Jingktah Hapoh ka Jingpyniaid Kam	Jingdonkam	Jingthew ban pynduna
Land Use (Ka Jingpyndonkam ia ka Khyndew)	Jingkylla kaba neh na ka rep ka riang sha ka kam shna kam	Jingrit-Jingpdeng	Job creation; CSR livelihood support (Ka jingpynmih kam; jingkyrshan ia ka kamai kajih da ka CSR)
Topography (Ka Dur ka Jaka)	Ym don jingkylla shuh ba la khmih lynti	Insignificant (Khlem jingdonkam)	Maintain contour integrity (Pynneh ia ka jinglong ba mar ryngkat jong ka jaka)
Hydrology (Ka Jingpule Um)	Ym don jingpynmih eiei shabar – Ka rukom pynmih um khlem jingbret ZLD	Insignificant (Khlem jingdonkam)	Ka jingpeit bniah kaba bteng; ka jingpyniaid ia ka um slap
Traffic(jing iaid lynti jong ki kali)	Jingkiew ha ka jingkit ia ki mar tylli bad ki jingmih	Jingpdeng	Ka plan jingiada ha lynti; ki jingkhanglad jingstet; ki lynti ba la pynmadan
Noise(jingsawa)	Jingkiew ka jingsawa na ki kor tylliat, ki fens, ki jingkit	Jingrit-Jingpdeng	Ki kor khang jinsawa, ka jaka ri dieng: PPE
Ka Jingpyntngit Lyer ba Her	Pui pui na ka jingpyniaid mar, jingthep, jingpynkynriah	Jingpdeng	Ki jingkhang jingsawa da ki pla (bag filters
Air Pollution (Stack Ka Jingpyntngit Lyer	PM, SOX, NOx, CO ba mih na kiln/CPP	Jingpdeng	ESP, ki iieng pla Low ki kor thang umphniang kiba pynmih khyndiatia ka NOx jingthew mawshun

Table 1.8: Ka Jinglong jong ka Lyer - Ka Bynta ba Pyniaid Kam

Fugitive Emissions

Tynrai	Jingktah	(Ka Jingiar/Jingneh	Ka jingpynduna
Ka Jingpyniaid ia ki Mar tylli	Ka jingpui pui ka PM	Ha ka jaka, ba bteng	Ki jingkhang jingsawa da ki pla
Ka Jingtylliat (Mawshun/Dewiong)	Pui pui bad PM	Ha ka jaka, ba bteng	Ki kor pynmih pui pui; ki tiar APC
Ka Jingtylliat Clinker & Cement	Pui pui na ka rukom	Ha ka jaka	Ka Bag House ba don jingtrei bha

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Tynrai	Jingktah	(Ka Jingiar/Jingneh	Ka jingpynduna
	treikam		
ka Jingkhong & Jingsong	Ka PM ba her	Ha ka jaka	Ki kor lum pui pui; jinglum biang ïa kaba jaw
Ka Jingiaid ki Kali	Pui pui + NOx, SO ₂	Hapoh jaka treikam	Ki lynti ba la pynmadan; jingkhanglad jingstet

Table: 1.9 Ki Jingpynmih na Tyndong (Stack Emissions)

Tynrai	Ki jingpynjaboh	Ka Jingktah	Ka Jingpynduna
Kiln/Calci ner	PM, SOx, NOx, CO	Ka jingkynrei ka jing kit jong ka lyer jongka thain	ESP/Bag House; ki jingthang Low-NOx burners; De-NOx system
Cement Mill	PM	Jingsniew ka lyer ha ka dong ka thain	Bag House; ki rukom ba khang kut
CPP Boiler	PM, SOx,NOx	Ka jinghiar ka jinglong jong ka lyer	ESP; jingkhleh lime ; Low-NOx burners
Co-processing	Dioxins & Furans	Ki jing pynmih rit bal ah ban thew	Ka jingthang ha ka jing khleh ba jur: ki jing bud dien ba pyrkhing ia ki jingpynmih

1.7.3 JINGPULIE SUMMARY JINGÏAPHER JINGKTAH

Table 1.10: Ka Bynta ba Shna vs. Ka Bynta ba Pyniaid Kam - Ka Jingianujor

Ka bynta jong ka mariang	Ka Bynta ba Shna	Ka Bynta ba Pyniaid Kam
Ka Jingpyndonkam ïa ka Jaka	Ka jingpynwit shipor	a jingkylla kaba neh na ka rep ka riang sha ka kam shna kam
Topography (Ka Dur ka Jaka)	Jingpynkylla rit ïa ka dur ka jaka	Ym don jingkylla shuh
Air Quality (Ka Jinglong ka Lyer	Pui pui shipor (PM) bad tynsong kali	Jingpynmih ba bteng na tyndong + pui pui ba her
Ka Mariang Um	Ym don jingpynmih; jingma tang na kaba jaw	ZLD; ym don jingktah shabar
Ka jingsawa	Jingsawa kor bad kali	Jingsawa na ki kor tylliat, ki fens, jingkit
Ka Jinglong ka Khyndew	Jingpynwit ba duna	Lah ban don jingthew pui pui; la khmih da ki jaka jyrngam
Ka Jinglong Mariang	Jingpynwit shipor na ka jingtrei	Jingkylla jaka shong ba neh slem; jingpynduna da ki

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Ka bynta jong ka mariang	Ka Bynta ba Shna	Ka Bynta ba Pyniaid Kam
	shna	jaka jyrngam
Ka Im Lang Sah Lang	Ki kam shipor	Ki kam ba neh slem; ki jingmyntoi CSR/SEDP

Ka jinglah trei kam ha ka liang pisa (financial viability) jong ka projek la bishar da kaba peit bniah ia kine ki bynta kiba kongsan:

- Ka jinglut jingsep bad ka jingpyntreikam:**
Kane ka kynthup ia ka jingbishar bniah halor ka jinglut kaba janai jong ka jingtei (total investment cost), kynthup lang ia ka Environment Management Plan, bad ruh ia ka jinglut kaba la buh na ka bynta ka jingpyntreikam bad ka jingbat ia ki tiar ki tar (operation & maintenance).
- Ka jingbishar halor ka jingmyntoi bad ka jinglut (Cost– Benefit Analysis):**
Ha kane ka jingbatai la ai ruh ia ki statement kiba kongsan ha ka pisa kum ka Profit and Loss Statement, ka Projected Cash Flow Statement, bad ka Balance Sheet na ka bynta ban bishar ia ka jingmyntoi kaba shisha jong ka projek.
- Ki dak ban pynshisha ia ka jinglah trei pisa (Financial Indicators):**
Ka jinglah trei ha ka pisa la shim na ki dak kiba ju pyndonkam man-ka-sien, kum ka Internal Rate of Return (IRR) ha ka jingtei (investment) bad ka equity, ka Break-Even Point, bad ka Payback Period jong ka projek.
- Ka jingbishar ia ka jingkylla jong ki rukom pynkheĩn (Sensitivity Analysis):**
Ka jingstad/jingpule ka kut da ka jingbishar kumno ka Break-Even Point kan kylla ne kan ktah lada don ki jingkylla ha ki bynta bapher bapher ne ki variable kiba lah ban jia.

1.8 Ki jingtip shaphang ka Environmental Monitoring Programme:

kynthup ka schedule / ka jingbun briew jong ka jingpeitngor (frequency) kaba yn pyndonkam ha ki bynta bapher bapher jong ka mariang, katkum ki kyndon EC/CTE/CTO – la batai ha ka Table – 1.11.

Table No. 1.11 Jingbuddien Hadien ka Project

S.No.	Jingbatai	Man la katno sien	Jaka
1.	Jingtip shaphang ka jinglong ka suinbneng	Man la ka por	Ka jaka trei
2.	Jinglong ka lyer sawdong sawkun	Ar sien shi taiew bad man la ka por ha online	jan ka khyrdop ka jaka trei bad sha ki shnong ha ka liang ba beh bad liang ba pyrshah ka lyer na ka jaka trei, katkum ka max. GLC ba la ioh bad katkum ki kyndon EC/CTO.
3.	Ki jingpynmih ba iar	Man la ka lai bnai lane katkum ka EC/CTO	Cement Mill, Packing Plant, Raw Materials Handling Area & Coal Yard
4.	Jingbuddien ia ki jingpynmih na ki	Man la ka por ha online	Raw Mill&Kiln,Coal/PetcokeMill,ClinkerCooler, Cement Mill and CPP Boiler

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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	tyndong heh)		
5.	Jinglong ka um	Ar sien shibnai / Katkum ka NOC na CGWA	Ki tynrai um hajan bad katkum ki kyndon CTO.
6.	Jingbuddien ia ka um jaboh	Man la ka bnai bad katkum ka CTO	Sewage Treatment Plant katkum ka CTO.
7.	Jingiar jong ka um	Man la ka aiom / Katkum ka NOC na CGWA	Ki tynrai um hajan bad katkum ki kyndon CTO Conditions
8.	Jingbuddien ia ka jingphyrta		
(i)	Jingbuddien ia ka jingphyrta sawdong sawkun	Man la ka bnai bad katkum ka EC/CTO	jan ka khyrdop ka jaka trei, Health Centre
9.	Jingtohkit ka koit ka khiah ki nongtrei	Man la ka snem lane katkum ka Factories Act	HealthCentre /Dispensary
10.	Jingioh jingmut halor ka jingtrei kam jong ki APCE's / Jingpule ban biang	sien shisnem	RawMill/KilnBaghouse,CoalMillBagHouse, Cement Mill Bag House, Clinker Cooler ESP and CPP ESP.

1.9 Ki Jingpule Kyllum (Additional Studies):

Ki jingpule kiba la leh kynthup ia ka Jingpule Jingma (Risk Assessment) bad ka Plian Pyniaid Jingjia (Disaster Management Plan) katkum ki mat jong ka Dorkhast Jingbthah (ToR) kiba la pynmih da ka Kynhun Bishar Shnong Ban Pynioh Jingbit Jingbiang ka jylla Meghalaya (SEIAA), lyngba ka Kot No. ML/SEAC/SEIAA/PP/EJH/126/2025 bad ka Kot Nongpynithuh No. TO25B1101ML5999209N, ha ka 15 tarik Risaw 2025.

1.10 Ki Jingmyntoi na ka Projek

Ka projek kaba la thmu ban pyntreikam ka don shibun ki jingmyntoi kiba kongsan ban pyndap ia ka jingduna ha ka jingdon bad ka jingkiew stet jong ka jingdawa ia ka mawshun (siment). Ka projek kan long ruh ka lad ban pynkiew ia ka jingroi ka ioh ka kot ka jylla bad ka ri baroh kawei.

Ka Kompani Shree Cement ka la kular ban kyrshan ia ka jingroi ka jingkhelaiñ ha ka liang ka ioh ka kot bad ka imlang sahlang ha ki shnong kiba don sawdong jong ka jaka treikam.

Ki bynta kiba kongsan jong ka jingmyntoi na ka projek ki kynthup:

ka jingpynkhelaiñ ia ki jingtei, ki lad jingshakri bad ki jingdon jingem jong ka shnong (jingtei bad jingdon jingem),

ka jingkyrshan ia ka pule puthi,

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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ka jingpynkhlaiñ ïa ka koit ka khiah bad ka bha ka miat ka longiing longsem,

ka jingtei ïa ki jingdonkam paidbah, ka jingkyrshan ïa ki riti ki dustur,

bad ka jingkyrshan ïa ki kam ki jam jong ka imlang sahlang.

La pynkhreh ruh ïa ka Plan Pynroi ka ïoh Ka Kot bad Im lang Sahlang (Social and Economic Development Plan – SEDP) kaba bniah ïa ki jingdonkam jong ki paidbah, kynthup ruh ïa ki jingiakren, ki jingsngew bad ki jingai jingmut jong ki paidbah ha ka por Jingialang pynsngewthuh paidbah (Public Hearing), bad ïa ki jingdonkam kiba la lap lyngba ka Jingpule Pynpaw Jingktah ha ki Nongshongshnong (Social Impact Assessment – SIA).

Ka jingpyntreikam ïa kine ki bynta kin iarap shibun ban pynbha ïa ka jingim jong ki nongshong shnong bad ban pynlong ïa ka jingroi kaba neh arta ban trei haki sngi ki ban wan, ha ki shnong ki thaw kiba don sawdong jong ka projek.

1.11 Environmental Management Plan

1.11.1 Environmental Management Plan (Executive Summary – Concise Version)

Ka Environmental Management Plan (EMP) ka batai shaphang ki lynti treikam kiba kongsan ban khanglad, ban pynrit, bad ban peitngor ïa ki jingktah ha ka mariang ha ka por shna bad ha ka por treikam jong ka Proposed Integrated Cement Plant. Kane ka plan ka bud ryntih ïa ki aiñ mariang kiba treikam, ki kyndon jong ka CPCB, bad ki rukom treikam ba bha tam ha ka kyrdan indastri.

Ki mat ba kongsan jong ka EMP:

- Ka Pyniaid Air Qualityz
- Ka Pynbiang Noise
- Ka Pyniaid Wastewater & Stormwater
- Ka Pyniaid Solid & Hazardous Waste
- Ka Pyniaid Energy bad ki Jingdonkam
- Ka Jingpynbait Um Jingliew (Rainwater Harvesting) bad ka pyndonkam shibun ïa ka um ba la treit
- Ka Pynthung Greenbelt
- Ka Health & Safety jong ki Kamai
- Ka Jingbiang Socio-economic
- Ka Pynbiang Budget ban ai jingkyrshan ïa baroh ki lad pynsah jingim

1.12.2 ki jingmut ba kongsan jong ka EMP :

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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- Pyniaid ba ki emissions bad ki waste ki long baroh ha ki kyndon statutorily (kaba la buh da ka kano kano ka kyndon)
- Pynshisha ïa ka jingpyndonkam kaba biang jong ka um bad ka bor ding
- Ban pynneh ia ka jinglong jingman ka kamai kajih kaba shngain bad ka mariang
- Ban pynkhlain ia ka jingpynkhreh haba don ka jingjia sniew (disaster preparedness) bad ban pynduna ia ki jingma
- Ban bishar ia ka jingtreikam jong ka mariang (environmental performance) na ka bynta ka jingpynbha man la ka por
- Ban kyntiew ia ka jingiada mariang (ecological buffer) lyngba ka jingthung dieng bad ka greenbelt

1.12.3 ka mang tyngka jong ka EMP :

Ka EMP ka pyntikna ba ki jingktah mariang na ka por tei bad por treikam kin long kiba lah ban tehlakam da ki lad pynrit, ki lad peitngor bad ki rukom treikam kiba skhem . Ka projek ka wanrah ruh shibun ki lad ai kam ai jam ha ka jingtrei, ki jingkyntiew ïa ki jingdon jingem, bad ka jingiarap ha ka ioh ka kot jong ki paidbah— kaba pynkhlaïñ ïa ka jingroi kaba neh (sustainable development) ha ka thain.

Table No. 1.12 EMP Details.

S r. N o.	Particulars	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/Year)
1	Ka Jingtrei ban Pynbiang Pollution ha Por Jingtrei (Construction Stage) (Pynsah dust, jingtrei bad jingpynbiang wastewater, ki jalan, monitoring, jingpynbiang muck)	50.00	5.00
2	Ka Pynbiang Air Pollution	1840.00	218.00
3	Ka Pynbiang Water Pollution	38.00	19.50
4	Ka Pynbiang Noise Pollution	20.00	3.50
5	Ka Monitoring jong Ka Jingma Jingpyniaid	308.00	29.00
6	Ka Pynbiang bad Pyniaid Hazardous Waste	5.00	5.00
7	Ka Health & Safety jong ki Kamai	50.00	5.00
8	Ka Pynthung Greenbelt & Ka Thung Dieng-jingsah (Plantation)	41.35	15.00
T o ta	—	2352.00	300.00

Ka Integrated Cement Plant kaba don ka capacity jong ka clinker: 0.95 million TPA, Cement: 0.99 million TPA (OPC, PPC, PSC, SRC, LC3, RHPC & Composite Cement), CPP: 15 MW, WHRS: 7 MW) bad ki DG Sets 2500 KVA (1x2500 KVA ne 2x1000 KVA & 1x500 KVA ne 1x1000 KVA, 2x500 KVA & 2x250 KVA) ha **Khara Siang Lum Pyrshin**, ha ka shnong **Daistong**, ka District jong **East Jaintia Hills (Meghalaya)** da **Shree Cement Ltd.**

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S r. N o.	Particulars	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/Year)
I			

1.13 Ka jingma jingkoit jingkhiah ha ka kam ka duk (Occupational Health Hazard):

Shree Cement Ltd. kan pyntreikam ka Policy Safety, Health and Environment (SHE) kaba bniah ban tehlakam bad ban pynrit ia ki jingma ha ka jaka trei. Ki thong ba kongsan ki long ban khanglad ia ki jingma, ban pynlong ka jaka trei kaba shngaiñ, bad ban sumar ïa ka koit ka khiah jong baroh ki nongtrei. La buh ruh da ka mang tyngka kaba long Rs. 50 Lakhs (capital) bad Rs. 5 Lakhs (annual recurring) na ka bynta lai snem kiba nyngkong, ban tei bad ban bat biang ia ki rukom trei Occupational Health and Safety kiba skhem bad biang pura.

1.14 Jingpynkut:

Ka projek ba la thmu ban pyntreikam kan wanrah shibun ki jingmyntoi ha ka liang socio-economic sha ki shnong ki thaw kiba don sawdong da kaba kyntiew ia ka jingtei ia ki jingdon jingem, pynkh laiñ ia ka pule puthi bad ka koit ka khiah, bad ban thaw ki lad trei kam kiba bun. Ka projek kan ai bynta ruh ha ka jinglut sorkar lyngba ki khajna bad ki bai sorkar.

Ki jingktah ha ka mariang kin long hapoh ki kyndon ba lah ban shah namar ka rukom tei ba bha, ka jingpyniaid matlah ia ki jingpynpollut bad ka jingpeitngor ba kham kham. Ka jingpynkiew ïa ka greenbelt sawdong bad hapoh ka jaka shna kan iarap ruh ban pynrit ïa ki jingpynmih kumjuh ban pynbha ïa ka mariang hapoh ka dong. Ka jingpynlong ïa kane ka projek ka la shu pynpaw ba kan iarap ban kyntiew ïa ka jingroi ka jingkoit jong ka thaiñ ha ka rukom ba sustainable bad ha kajuha por ban bat skhem ia ki rukom sumar mariang kiba eh bha.
