VISHWA SAMUDRA

CHALLENGE IT. CHANGE IT.

Project Description (Summary) for Concrete Batching Plant

Upgrading of the Palmyra to Moleson Creek Highway - Lot3 (Number 55 to Moleson Creek) in Region 6, Skeldon, Guyana

Employer	**Permanent Secretary, Ministry of Public Works, Guyana** **Address -Oranapai Towers, Wight's Lane, Kingston, Georgetown, Guyana**
Consultant/Engineer	**RITES LIMITED (A Govt. of India Enterprise) in association with C.B. & Associates Inc** **Address- 1st floor, 34-36, Palmyra Village, East Canje, Berbice, Project Chainage 2+250, Landmark- Lanzal Building Material Shop, Guyana**
Name of Contractor/Company	**Vishwa Samudra Engineering Pvt Ltd.** **Address- LOT1 South Half Lamaha & Cummings Street Albert town-Georgetown, Guyana**

	Name	Contact Details	Designation	Date	Signature
Prepared By	**Vivek Kumar**	**+592-7432067**	**Environmental Manager**	**15.05.2026**	
Reviewed By	**Vipin Onkar Tayde**	**+592-7432077**	**EHS Manager**	**16.05.2025**	
	Rajesh Muthukrishnan	**+592-7486080**	**Project Manager**	**16.05.2026**	
Approved By	**Srinivasa Rao Guttula**	**+592-6690858**	**Project Director**	**18.05.2026**	

1. **Description of the proposed project**
   A- Name of The Project -Upgradation of the Corentyne Highway Palmyra To Moleson Creek Lot-3 (Village 55 To Moleson Creek)
   B- Proposed Batching Plant Location- Guyana Sugar Corporation INC. Skeldon Compound
   C- Co-Ordinates- Latitude: 5°52'37.0"N, Longitude: 57°08'37.1"W
   D- Nearest Town:- Corriverton
   E- Nearest Village: - Village no 79
   F- Current Soil type – Clay
   G- Topography and gradient – Flat
   H- Nearest Sensitive Receptors

Sl. No.	Land Use	Distance	Remarks
1	Residences	120.85 m & 135.39 m	
2	Major Water Courses/Canel	36 m & 90 m	
3	Place of Worship	182 m	Temple
4	Schools	247 m	Skeldon School
		278 m	Skeldon Primary School
		282 m	Line Patch C Nursery School
5	Hospitals	246 m	Skeldon Hospital
6	River/Sea Defence	550 m	

2. **No Alternatives required: -** No alternatives are considered
3. **Base line: -**

(a) Physical Environment – natural condition

- Land/Soil: Clay type
- Water: Groundwater depth approximately 2 m
- Air Quality: PM10-162 $\mu g/m^3$ and PM2.5 - 19.9 $\mu g/m^3$ within 210 m , As per ESIA Report of the Project (05°52’31.72” N 057°08’32.07” W)
- Noise Levels: Ambient noise within permissible limits for rural/urban setting (Noise- Max 83.1dBA and Min 51.4 dBA , Average -66.6 dBA As per ESIA Report of the Project (05°52’31.72” N 057°08’32.07” W)

(b) Ecological Environment

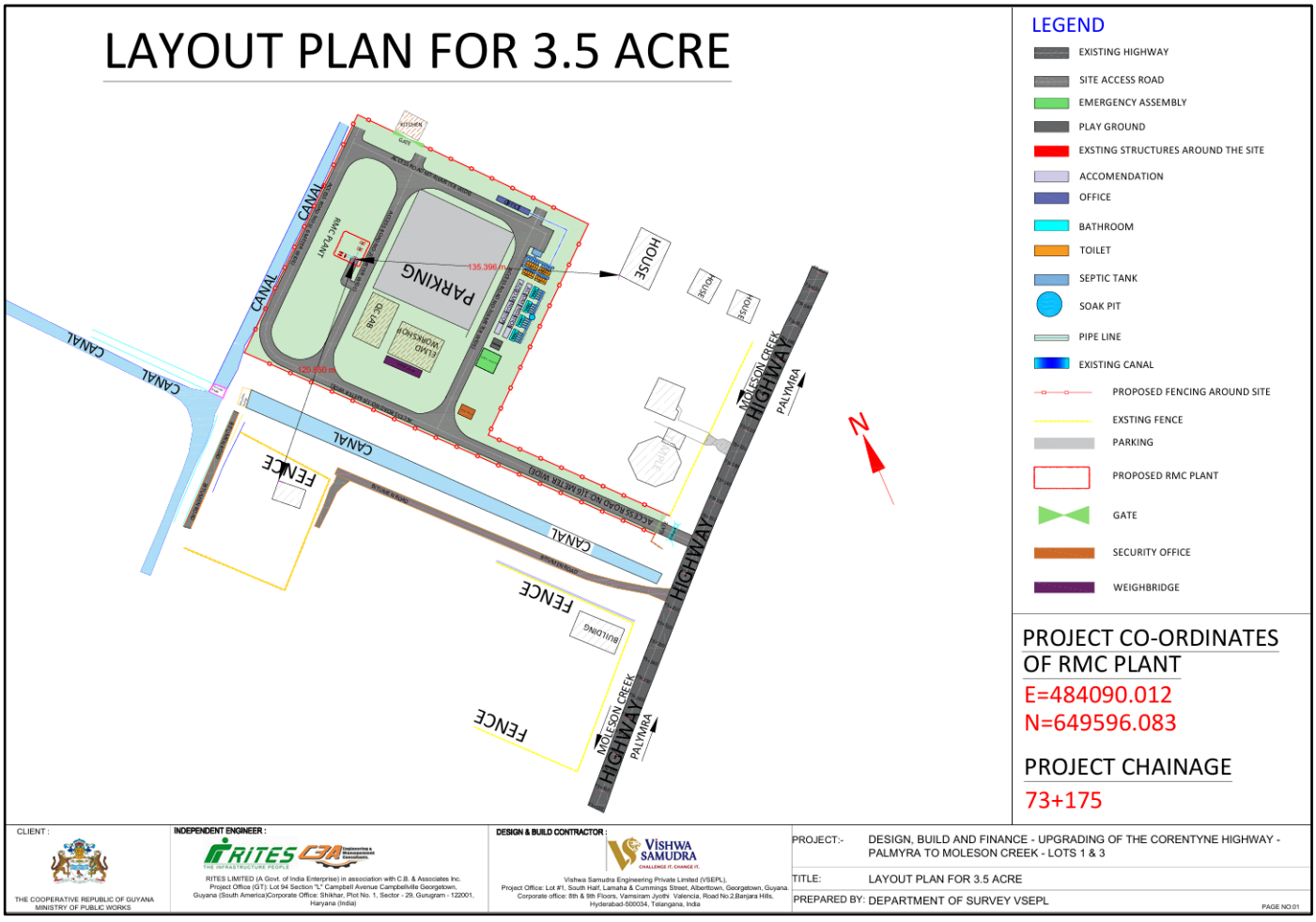
- **Flora:**
  Vegetation is mainly **sugarcane plantations, grasses, shrubs, and scattered tree cover**, with managed agricultural landscapes dominating the estate area.
- **Fauna:**
  Presence of **common rural wildlife such as birds, small mammals, reptiles, and insects**, typical of agricultural coastal ecosystems.
- No **endangered or protected species** are recorded in the immediate project footprint based on available regional ecological characteristics.

- No **eco-sensitive zones, national parks, or protected forest areas** are located within the project site boundary.

(c) Social Environment

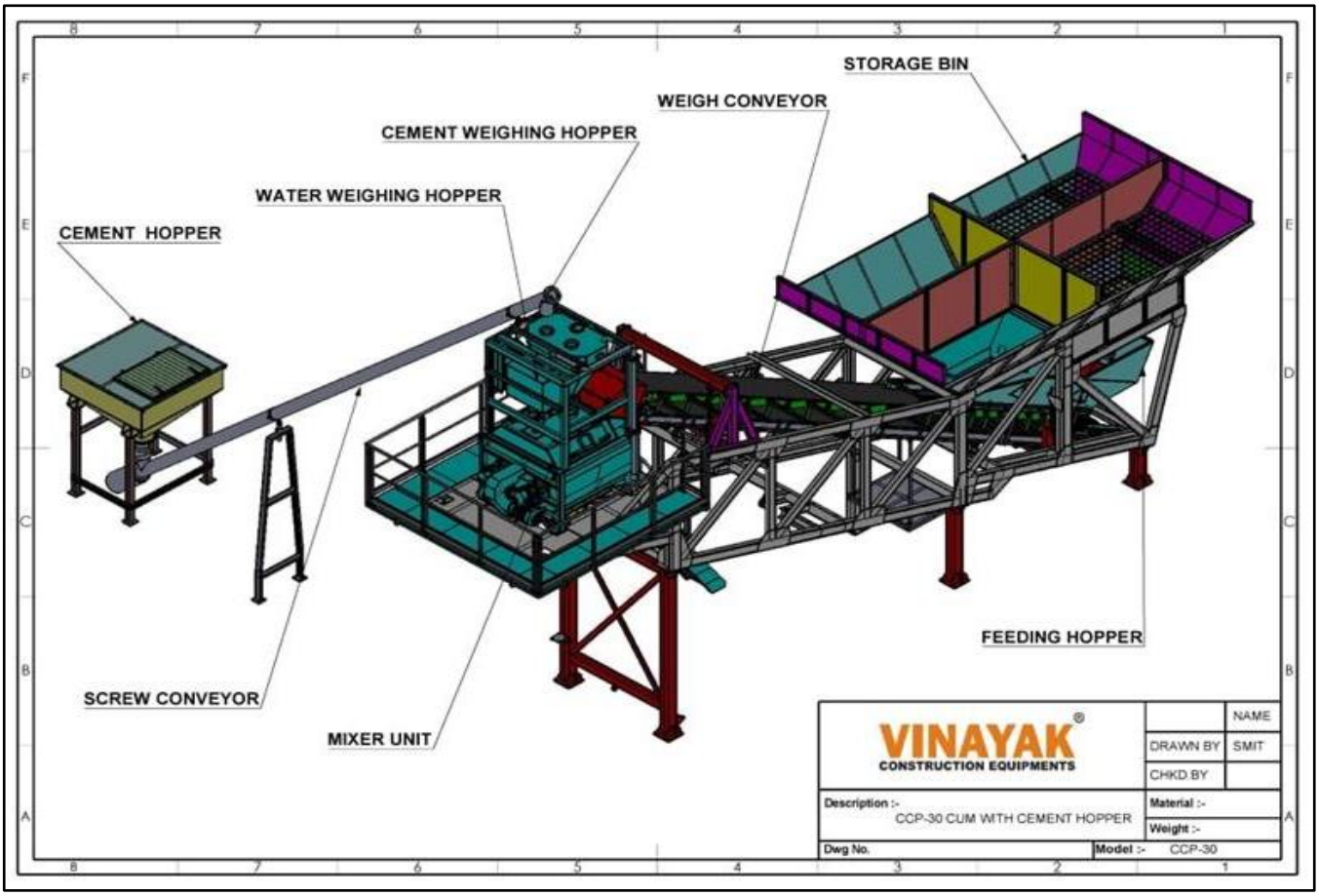
- **Economic Activities:**
  The local economy is predominantly dependent on sugar production, agriculture, and associated industrial activities, along with supporting services such as transport, trade, and small businesses.
- **Population Characteristics:**
  The surrounding area includes peri-urban and rural communities, with settlements linked to plantation and estate-based livelihoods.
- **Cultural/Recreational Sites:**
  Religious and community structures exist in the wider region; however, no major cultural or religious sites are directly located within the project footprint.

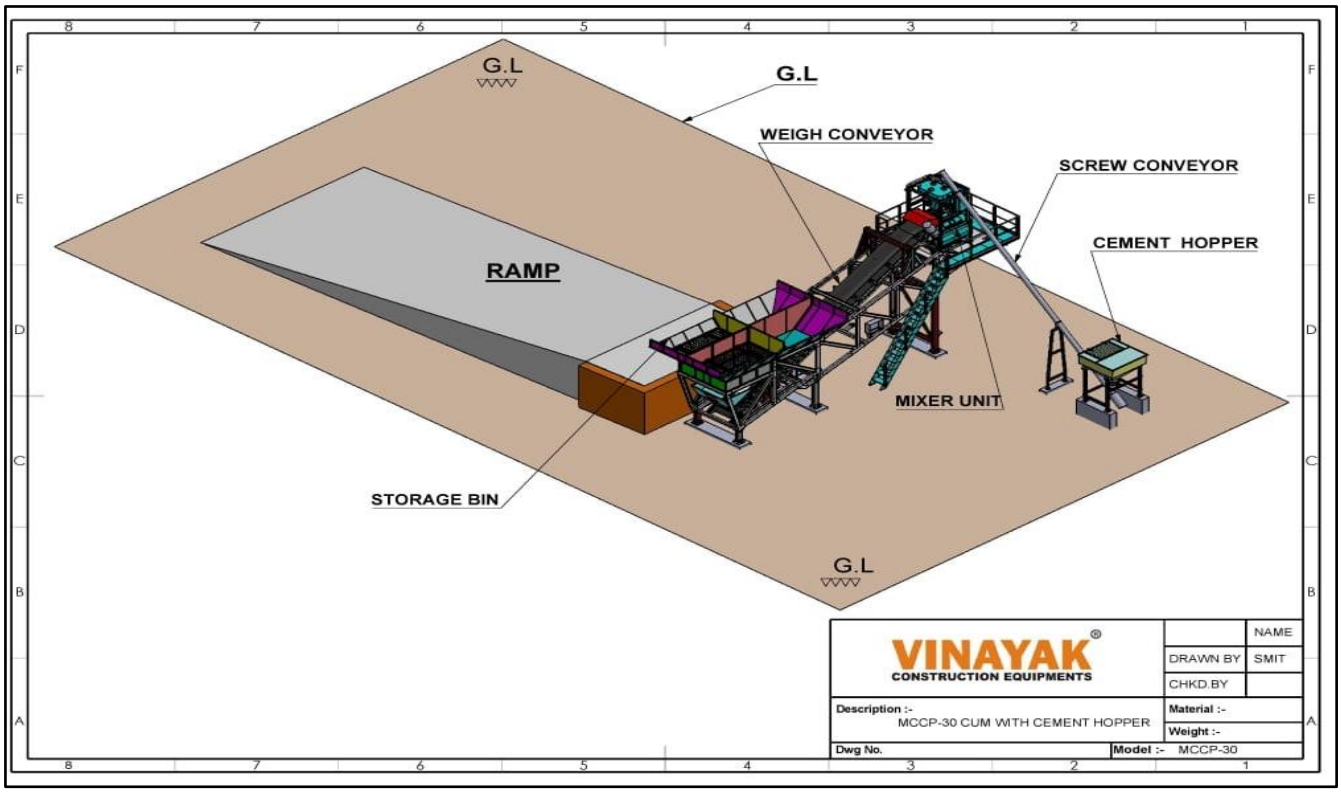
4. Layout of the Project



5. Description of the design of Batching plant –

(a) Design/Layout of Batching plant





(b) Specification of Structures

- Concrete batching plant capacity -20 m^3/hr
- Cement silos capacity -1 Ton (only one)
- Aggregate storage bins – Covered with Green Net
- Weigh batching system -Automatic
- DG set capacity -82.5 kVA
- Water storage tank capacity-10 KLD
- Office/temporary shed type - Prefabricated Steel Container

(c) Volume of expected pollutants, etc.

The proposed 20 m^3/hr mobile batching plant will generate limited environmental emissions primarily in the form of fugitive dust (PM10 and PM2.5) from cement and aggregate handling, estimated in the range of 0.02–0.08 kg/hr for PM10 under uncontrolled conditions. DG set operations may generate minor exhaust emissions including NOx, CO, and SO_2 within standard limits. Noise levels are expected between 75–85 dB(A) at source, attenuating with distance. Wastewater generation will be minimal (0.5–1.5 m^3/day) and will be reused after settling. Solid waste will mainly consist of empty cement bags and minor construction debris, which will be managed as per standard waste management practices.

(d) **Capital Investment –** For All Over Project- 199 million USD
For Batching Plant Setup- Approx 320,000 USD

(e) No of Employee/Workers for Each Stage of the project: -

5 Nos of Workers/Employee	Construction Phase
5 Nos of Workers/Employee	Operation Phase

(f) Rate of Production: - 20 m^3/hr

(g) Transportation route: - Between Village Number 55 to Moleson Creek

(h) Activities: -

- **Operation & Production Process**

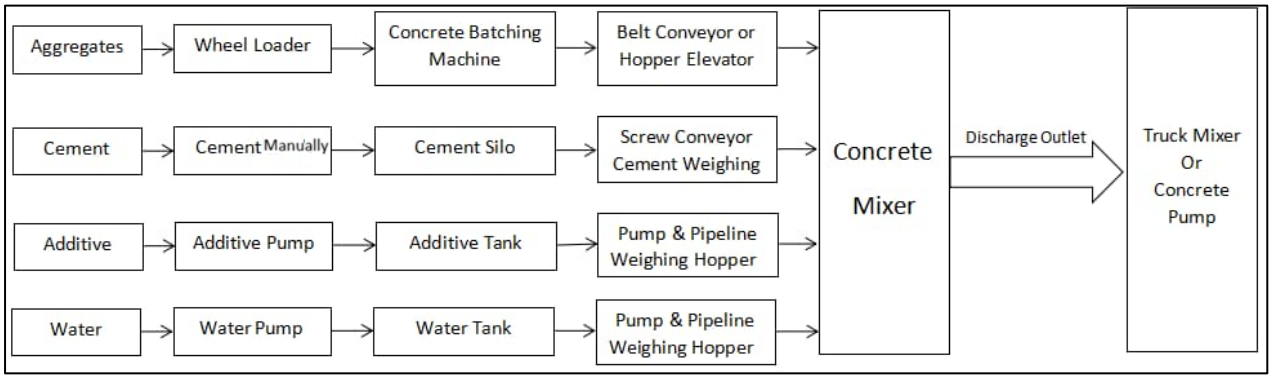
The batching plant is designed to produce ready-mix concrete through a semi-automated process involving:

- ✓ Receipt and storage of raw materials (cement, sand, aggregates, water, admixtures)
- ✓ Weighing and batching of materials as per mix design
- ✓ Mixing in a central mixer (pan/planetary mixer)
- ✓ Discharge into transit mixers or tippers
- ✓ Transportation to placement site

- **Stage-wise Process Guide**

Stage	Activity	Description
1	Raw Material Procurement	Cement, Aggregates, Sand, Water, admixtures sourced from suppliers
2	Material Storage	Cement in silos, aggregates in bins, admixtures in tanks
3	Material Handling	Conveyors/loaders used for aggregate transfer
4	Batching	Weighing of materials based on mix design
5	Mixing	Mixing in batching plant mixer to required consistency
6	Quality Control	Slump test, cube sampling, consistency checks
7	Discharge	Mixed concrete discharged into transit mixer
8	Transportation	Delivered to site of use
9	Placement	Pouring, compaction, finishing
10	Cleaning & Waste Handling	Cleaning mixer and handling wash water/slurry

- **Process Flow Diagram**



(i) Use of Natural Resources –

Sl. No	Material	Usage	Quantity
1	Cement	Concrete production	370 Kg/ m^3
2	Coarse Aggregate	Concrete production	650 Kg/ m^3
3	Sand	Concrete production	700 Kg/ m^3
4	Water	Concrete production	148 ltr/ m^3
5	Water reducing admixture	Reducing Water Content	2.96 liters / m^3
8	Diesel Fuel	DG set and equipment fuel	7-8 L/hours
9	Lubricating oil	Equipment maintenance	20-60L/month
10	Hydraulic oil	Hydraulic systems	30-50 L/Month
11	Grease	Machinery lubrication	35-40 kg/month

(j) Source of utility services –

Sl. No	Type	Source	Quantity	Remarks
1	Process Water	Guyana Water INC	148 ltr/m3	-
2	Electricity	Diesel Generators	7-8 ltr/hour	82.5KVA

(k) Waste Production –

Sr. No.	Waste Type	Hazardous / non-hazardous	Source Area	Estimated Quantity	Storage Method	Disposal / Treatment Method
1	Empty Cement Bags	Non-Hazardous	Batching Plant	100 -150 bags/month	Covered storage area	Disposal through Third Party Agency
2	Concrete Slurry / Sludge	Non-Hazardous	Mixer Washing Area	20-30 m^3/month	Settling pit	Reuse / disposal at approved site
3	Aggregate Dust / Spillage	Non-Hazardous	Aggregate Yard	10-20 kg/month	Collected periodically	Reuse in batching process
4	Domestic Waste	Non-Hazardous	Camp Area / Office	50-60 kg/day	Color-coded bins	Disposal through Third Party Agency
5	Food Waste	Non-Hazardous	Camp Kitchen	2 kg/day	Covered bins	Disposal through Third Party Agency
6	Plastic Waste	Non-Hazardous	Camp / Office	1 kg/month	Separate collection bags	Recycling
7	Scrap Metal	Non-Hazardous	Maintenance Area	10 kg/month	Designated scrap area	Disposal through Third Party Agency
8	Used Oil	Hazardous	DG Set / Maintenance	20-30 liters/month	Leak-proof drums	Authorized hazardous waste vendor
9	Oily Cotton Waste / Filters	Hazardous	Equipment Maintenance	1 kg/month	Sealed container	Authorized disposal
10	Chemical / Admixture Containers	Hazardous	Batching Plant	10-15 nos./month	Designated hazardous storage	Authorized disposal/recycling
11	Sewage Wastewater	Non-Hazardous	Camp Toilets	2.88 m^3/day	Septic tank / soak pit	Disposal through Third Party Agency
12	Wastewater from Washing	Non-Hazardous	Batching Plant	1 m^3/day	Settling tank	Reuse for dust suppression

(l) Duration of the project for each Phase –

Project Phase	Estimated Duration
Mobilization & Site Preparation	2-3 weeks
Installation & Commissioning of Mobile Batching Plant	1 week
Operational Phase	As per project requirement (estimated 36 months)
Demobilization / Site Restoration	2-3 weeks after project completion

(m) Potential Impacts and their Significance –

Sl. No	Environmental Aspect	Potential Impact	Significance	Mitigation Measures
1	Air Quality	Dust generation from cement, aggregates, and vehicle movement	Minor to Moderate	Water sprinkling, covered storage, PPE
2	Noise	Noise from mixer, DG set, and trucks	Minor	Equipment maintenance, restricted working hours
3	Water	Wastewater from equipment washing	Minor	Settling pit and water reuse
4	Soil/Land	Cement or oil spills may contaminate soil	Minor	Bunding, spill kits, proper storage
5	Waste Generation	Empty cement bags, sludge, domestic waste	Minor	Segregation and disposal through Agency
6	Traffic	Increased movement of trucks and equipment	Minor	Traffic management and speed control

6. Potential Impacts and their Significance

Sl. No	Assessment Requirement	Potential Impact Assessment	Significance
1	Extent of Impact / Area of Influence	Potential impacts are expected to be localized within the batching plant site and immediate surrounding areas. Environmental aspects that may be affected include air quality (dust emissions), noise levels, soil contamination from spills, minor wastewater generation, and increased vehicle movement. Ecological impacts are expected to be minimal due to the already modified agricultural/industrial setting. Social impacts may include temporary traffic increase and positive employment opportunities.	Minor to Moderate

2	Transfrontier Nature of Impacts	The proposed project is not expected to generate any transboundary or cross-border environmental impacts beyond the project area or national boundaries.	Negligible
3	Magnitude and Complexity of Impacts	Impacts associated with the batching plant are temporary, site-specific, and operational in nature, mainly related to dust, noise, wastewater, and waste generation. The impacts are considered manageable using standard mitigation measures.	Low to Moderate
4	Probability of Impacts	Dust emissions, noise generation, wastewater production, and waste generation are likely during plant operation; however, impacts are expected to remain controlled under normal operational practices.	Likely but Controllable
5	Duration, Frequency, and Reversibility of Impacts	Impacts will occur mainly during operational activities and are expected to be short to medium-term, intermittent, and reversible upon completion of project activities and site restoration.	Temporary and Reversible
6	Cumulative Impacts with Other Projects	Minor cumulative impacts may occur when combined with nearby industrial, transportation, or construction activities, particularly related to dust, traffic, and noise. However, no significant cumulative environmental effect is anticipated under controlled operational and mitigation measures.	Low Significance

7. Proposed Environment Management and Mitigation –

Sl No	Environmental Aspect	Potential Impact	Mitigation Measures
1	Air Quality	Dust emissions from cement, aggregate handling, and vehicle movement	Water sprinkling, covered aggregate storage, enclosed silo, tarpaulin covering of trucks, regular maintenance
2	Noise	Noise from batching plant, DG set, and vehicle movement	Acoustic enclosure for DG set, maintenance of equipment, PPE (ear plugs), restricted working hours
3	Water & Wastewater	Wastewater from washing and cleaning activities	Sedimentation/settling tank, reuse of treated water, no direct discharge to natural water bodies
4	Soil/Land	Spillage of cement, fuel, oil contamination	Impervious flooring, bunding, drip trays, immediate spill cleanup

5	Solid Waste	Empty cement bags, construction debris, sludge	Waste segregation, recycling of cement bags, reuse/disposal of sludge at approved sites
6	Hazardous Waste	Used oil, oily rags, filters	Storage in sealed containers, disposal through authorized hazardous waste handlers
7	Ecology	Minor disturbance to vegetation and fauna	Restrict site boundary disturbance, dust control, no encroachment into sensitive areas
8	Social Environment	Traffic increase, safety risks, employment generation	Traffic management plan, signage, PPE for workers, local employment preference
9	Traffic	Movement of trucks causing congestion	Defined entry/exit routes, speed control, scheduling of vehicle movement
10	Monitoring	Non-compliance risk	Regular air, noise, and water monitoring; environmental record keeping

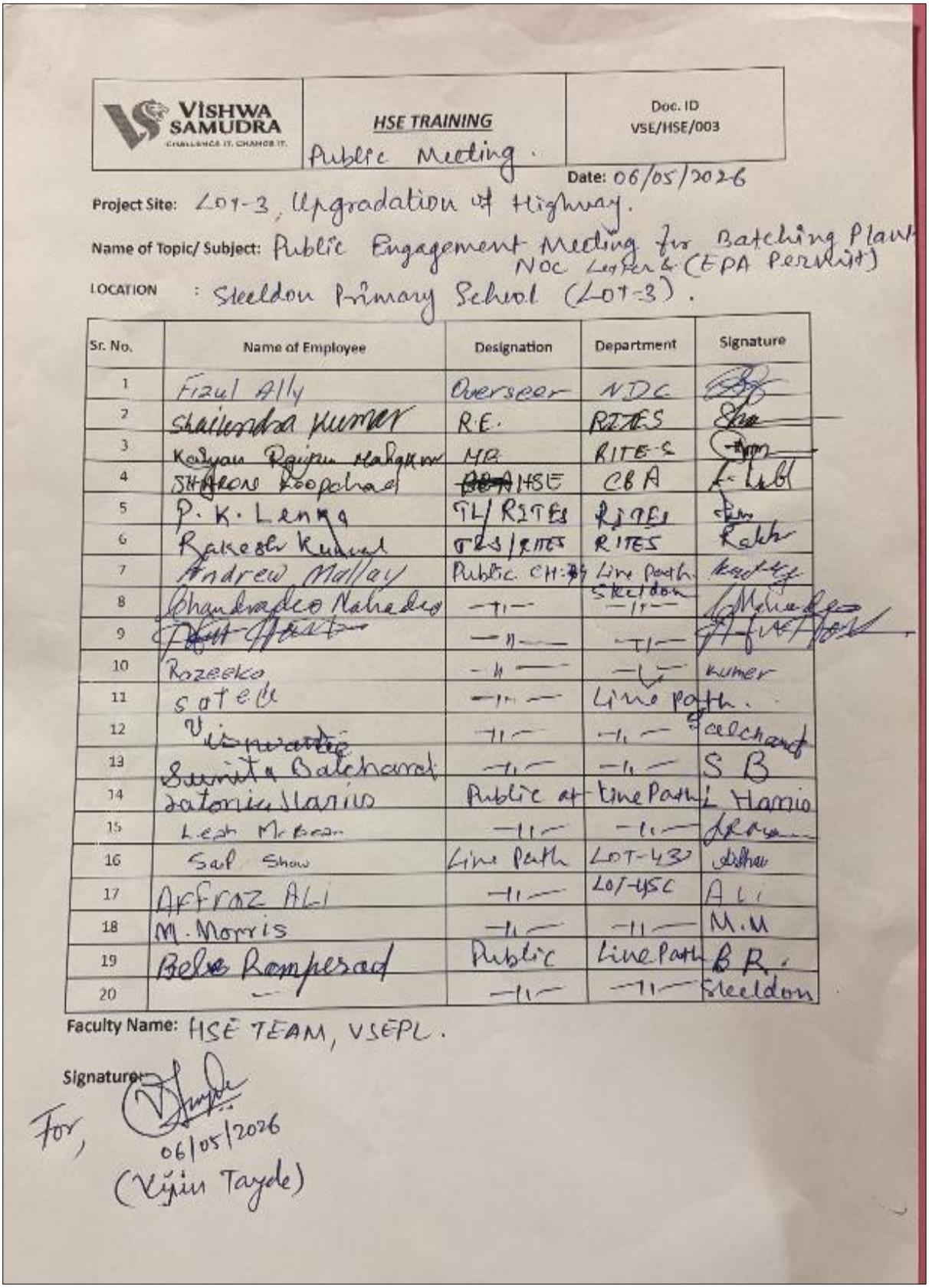
8. Summary of minutes of public Consultation –

A public consultation meeting was conducted at Skeldon Primary School on 6th May 2026, followed by house-to-house public engagement within the surrounding neighbourhood on 7th May 2026.

During these consultations, the scope, objectives, and nature of the proposed project were presented to the stakeholders. The potential environmental and social impacts associated with the project during its operational phase were explained in detail, along with the proposed mitigation and management measures to be implemented to minimize any adverse effects.

Photographs:-

Attendance Sheet:-



VISHWA SAMUDRA
CHALLENGE IT, CHANGE IT.

HSE TRAINING

Public Meeting.

Doc. ID
VSE/HSE/003

Date: 06/05/2026

Project Site: Lot-3, Upgradation of Highway.

Name of Topic/ Subject: Public Engagement Meeting for Batching Plant NOC Letter & (EPA Permit)

LOCATION : Steeldon Primary School (Lot-3).

Sr. No.	Name of Employee	Designation	Department	Signature
1	Fizul Ally	Overseer	VDC	
2	Shailendra Kumar	R.E.	RITES	
3	Kalyan Rajan Nahakur	MO	RITES	
4	Sharon Roopchand	HSE	CBA	
5	P. K. Lenka	TL/RITES	RITES	
6	Rakesh Kumar	TRS/RITES	RITES	
7	Andrew Malloy	Public CH:[illegible]	Line Path. Steeldon	
8	Chandradeo Nahadeo	—"—	—"—	
9	[illegible]	—"—	—"—	
10	Rozeeka	—"—	—"—	Kumer
11	Sotelo	—"—	Line Path.	
12	Vishwanath	—"—	—"—	Balchand
13	Sunita Balchand	—"—	—"—	S B
14	Saturia Harris	Public at	Line Path	Harris
15	Leah Mr Bean	—"—	—"—	
16	Saul Show	Line Path	LOT-43	
17	Affraz Ali	—"—	LOT-45C	A L
18	M. Morris	—"—	—"—	M.M
19	Belo Rampersad	Public	Line Path	B R.
20	—	—"—	—"—	Steeldon

Faculty Name: HSE TEAM, VSEPL.

Signature:

For,

06/05/2026

(Vijay Tayde)

NOC Letter from NDC after public Consultation: -

CRABWOOD CREEK/MOLESON

NEIGHBOURHOOD DEMOCRATIC COUNCIL (N.D.C)

Office of the Neighborhood Democratic Council
Lot '2', Section 'A', Grant 1802, Crabwood Creek, Corentyne, Berbice

EMAIL: ndccwcmoleson@gmail.com

Office Tele: 339-2330

Date: 7/5/2026

EPA Manager
Whim Branch
Corentyne, Berbice

Dear Sir/Madam,

This is to certify that the above-mentioned Neighbourhood Democratic Council (NDC) has no objection to **Vishwa Samudra Engineering Pvt. Ltd. (VSEPL)** operating a Ready-Mix Concrete Plant to be situated on Tract 'A', being a portion of GuySuCo land measuring approximately 3.38 acres, located at Skeldon, Corentyne, Berbice.

Public awareness activities were conducted on 6th May, 2026 at Skeldon Primary School, and on 7th May, 2026 through house-to-house engagement within the community.

This certification is issued for your information and necessary action.

Thank you.

Yours faithfully,

CRABWOOD CREEK MOLESON
NEIGHBOURHOOD DEMOCRATIC COUNCIL
LOT 2A GRANT 1802 C.W.C
SIG:
TEL:

.....

Mr. Fizul Ally
Overseer

9. Description of any assumptions, uncertainties and gaps in knowledge. –

The assessment is based on available site information, secondary data, and standard engineering assumptions applicable to mobile batching plant operations. It is assumed that the project will operate within proposed design capacity (20 m^3/hr) and follow standard environmental management practices.

Uncertainties may exist due to variations in site-specific conditions such as weather, groundwater depth fluctuations, traffic intensity, and seasonal environmental changes.

Gaps in knowledge are primarily related to the absence of long-term site-specific monitoring data for air quality, noise, and groundwater parameters at the exact project location. These will be addressed through regular monitoring during the operational phase.

10. A non-technical summary of the project

The proposed project is a mobile concrete batching plant with a capacity of 20 m^3 per hour. The plant will be used to produce ready-mix concrete required for construction activities in the project area. It will be a temporary installation and will operate only for the duration of the construction works.

The plant will receive raw materials such as cement, sand, aggregates, and water, and mix them in controlled proportions to produce concrete. The operation will involve movement of trucks for transportation of materials and finished concrete.

Minor environmental impacts such as dust generation, noise, and wastewater from equipment cleaning may occur during operation. However, these impacts will be temporary, localized, and will be managed through proper environmental control measures such as dust suppression, waste management, and water reuse.

The project is expected to provide employment opportunities for local people and support construction development in the area. Once the construction activities are completed, the mobile plant will be dismantled, and the site will be restored to its original condition.