

ENVIRONMENTAL MANAGEMENT PLAN (EMP) REPORT

FOR

HBM NIGERIA PLC DEPOT, ONITSHA

(FORMERLY LAFARGE DEPOT, ONITSHA)

ONITSHA-ENUGU EXPRESSWAY, OGIDI, IDEMILI NORTH LOCAL GOVERNMENT ANAMBRA STATE



PROPONENT:

HBM NIGERIA PLC

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SUBMITTED TO:

ANAMBRA STATE MINISTRY OF ENVIRONMENT

MAY 2026

CERTIFICATION

We certify that this Environmental, Social, Health and Safety Management Plan (ESHSMP) Report for HBM Nigeria Plc Depot, located at Onitsha-Enugu Expressway, Ogidi, in Idemili North Local Government Area, Anambra State, was carried out in accordance with Professional Practice and the Anambra State Ministry of Environment (MoEnv.) guidelines.

Signed.....

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Signed.....

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We, the undersigned members of the report preparation team, certify that we have prepared this Environmental Management Plan in accordance with professional standards, regulatory requirements and ethical guidelines. We affirm that the findings, conclusions and recommendations contained in this report are accurate, complete and based on objective evidence.

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This List of Preparers forms part of the Environmental Management Plan for the HBM Nigeria Plc Depot, Onitsha-Enugu Expressway, Ogidi, Anambra State. Prepared by Stellovate Limited, May 2026.

DISCLAIMER

This Environmental Management Plan has been prepared by Stellovate Limited in good faith and to the professional standard reasonably applicable at the time of preparation. It draws on information supplied by the proponent, direct site observation, on-site instrument readings and photographic documentation carried out in May 2026, and relevant published regulatory and reference material. Stellovate Limited accepts no liability for decisions made by any party on the basis of this document outside its intended purpose of regulatory submission and internal environmental management planning for the facility. This document should not be reproduced, distributed or used for any purpose other than that for which it was prepared without the written consent of Stellovate Limited and the proponent.

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LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
ASEPAL	Anambra State Environmental Management, Protection and Administration Law, 2024
ANSEWCCA	Anambra State Erosion, Watershed and Climate Change Agency
ASWAMA	Anambra State Waste Management Authority
CCTV	Closed-Circuit Television
CO / CO ₂	Carbon Monoxide / Carbon Dioxide
dB(A)	Decibel, A-weighted (unit of measured sound level)
EEDC	Enugu Electricity Distribution Company
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESHSMP	Environmental, Social, Health and Safety Management Plan
FME _{Env}	Federal Ministry of Environment
GPS	Global Positioning System
HCHO	Formaldehyde
LA _{eq}	Equivalent continuous A-weighted sound level
LGA	Local Government Area
NESREA	National Environmental Standards and Regulations Enforcement Agency
NSDWQ	Nigerian Standard for Drinking Water Quality
OHS	Occupational Health and Safety
PM ₁₀ / PM _{2.5}	Particulate Matter (10 and 2.5 microns)
PPE	Personal Protective Equipment
TVOC	Total Volatile Organic Compounds
TWA	Time-Weighted Average
WHO	World Health Organization

EXECUTIVE SUMMARY

This report presents an Environmental Management Plan (EMP) for the HBM Nigeria Plc Depot at Ogidi, along the Onitsha-Enugu Expressway in Anambra State. The depot, formerly operated as the Lafarge Depot, Onitsha and now identified as a member of the Huaxin group, sits on a rented plot of about 1,800 square metres and is used for the receipt, storage and truck-based dispatch of bagged building materials. The first three parts of the report covers the preliminary pages and Chapters One to Three: why the EMP is being prepared and under what legal authority, a description of the depot and its surroundings, and the baseline environmental and social conditions recorded during the May 2026 site visit.

The site visit, supported by a portable air quality monitor and a handheld sound level meter, found a facility that already has a fair number of environmental and safety controls in place: perimeter fencing topped with razor wire, a manned gate, fire extinguishers and a marked muster point, no-smoking signage, a borehole for water supply, a septic tank and soakaway arrangement, ten named fire marshals, three trained first aiders, and a standing arrangement with St. Charles Borromeo Specialist Hospital, Onitsha for medical emergencies. Air quality readings taken on the day were within FMEnv reference limits, though taken while the yard was not in active loading, while three noise readings taken at the gated entrance, the middle of the yard and the extreme inner end of the compound (LAeq 68.9, 64.2 and 57.5 dB(A) respectively) show the entrance and mid-yard points above the lower bound of the indicative daytime range for a commercial and light industrial corridor, with the highest reading at the road-facing entrance confirming traffic as the dominant source. The visit also confirmed the two matters already flagged for immediate attention: the drivers/loaders rest house and its poorly ventilated convenience are too small for the numbers using them, and a fully paved section of the compound collects standing water with no outlet and needs a properly sited catchment pit.

This edition of the report carries the work a stage further still. Chapter Four sets out the mitigation and monitoring plan built on the Chapter Three findings: priority corrective action on the drivers/loaders facility and the catchment pit, ongoing management of dust, noise, water, sanitation and waste, an occupational health and safety programme that builds on what the depot already has in place, a monitoring schedule, and an indicative cost range and implementation timetable.

Chapter Five, to close with the institutional arrangements, consultation record and grievance mechanism.

CHAPTER ONE

INTRODUCTION AND REGULATORY FRAMEWORK

1.1 Background and Purpose of This EMP

HBM Nigeria Plc operates a depot along the Onitsha-Enugu Expressway at Ogidi, Anambra State, on a plot measuring approximately (from google map measurement which might not be the actual) 1,800 square metres. Of this, about 674.82 square metres (roughly 37.49 percent of the plot) is built up, and the remaining 1125.18 square metres, or about 62.51 percent, is open compound used for the truck yard, manoeuvring space, parking and circulation. The facility was previously run as the Lafarge Depot, Onitsha, before it came under its current operator, and it continues to serve broadly the same function: receiving bagged building materials, storing them under cover, and dispatching them by truck to customers across Anambra State and the wider eastern Nigeria market.

This EMP has been commissioned to bring the depot's day-to-day operation formally into line with the Anambra State Environmental Management, Protection and Administration Law, 2024, and to put on record, in one document, the environmental and social matters that a site inspection of the depot has raised. Two issues in particular stood out during that inspection and are treated as needing early attention rather than routine follow-up: the rest house provided for drivers and loaders is too small for the numbers who use it, and its attached convenience has a window that is too small to ventilate the space properly, making it uncomfortable for the people who have to use it; and a section at the inner part of the compound holds standing water after rain, which points to the need for a catchment pit sited well away from the truck loading and manoeuvring areas.

Because this EMP concerns a depot that is already built and already operating, it differs in one important respect from an EMP written for a project that has not yet broken ground. The baseline chapter of this report (Chapter Three) will be based on what was actually observed and measured at the site as it stands today, rather than on a prediction of conditions once construction is finished. Likewise, the mitigation and monitoring chapter (Chapter Four) is weighted toward corrective measures for an operating facility, such as fixing the rest house and convenience, siting the

catchment pit correctly, and formalising monitoring routines, rather than toward construction-phase controls of the kind used for a new building project.

1.2 Facility Background and Justification for This EMP

The depot sits in a fairly built-up commercial stretch of the Onitsha-Enugu Expressway, in the Ogidi/Ogbunike axis of Anambra State, at approximately 6°09'53.6"N, 6°51'17.8"E. Within the general vicinity are other transport and industrial operations (including a haulage company head office and other small industries), places of worship, schools, a filling station, and residential development. The depot itself is bounded by other commercial facilities, and its access is taken directly off the expressway, with enough setback in front of the compound for trucks to pull in, turn and reverse into the loading yard rather than reversing directly off the carriageway. A fuller account of the site and its surroundings, supported by the site maps and photographs taken during the inspection, will be given in Chapter Two.

Two things justify carrying out this EMP now rather than treating the depot as a matter for routine renewal only. First, Part 8 of the Anambra State Environmental Management, Protection and Administration Law, 2024 sets out a general expectation that facilities of this type maintain a documented Environmental, Social, Health and Safety Management Plan (ESHSMP) or its equivalent, registered with the Ministry, rather than operating without one. Second, and more immediately, the site inspection turned up specific gaps of the kind described in section 1.1 above that a management plan of this sort is meant to catch and correct. Beyond the two immediate concerns, the depot already has a working base of environmental and safety measures: a perimeter fence with razor wire and a gated, manned entrance; fire extinguishers and a marked muster point; no-smoking signage in the yard; a borehole supplying the site's water needs; a septic tank and soakaway system for sanitation; and an arrangement with St. Charles Borromeo Specialist Hospital, Onitsha for medical emergencies, backed by three first aiders drawn from among the depot's own workers. This EMP is intended to record what is already working, correct what is not, and set a monitoring routine that keeps both on track.

There is also a straightforward economic case for the depot's continued operation that this EMP does not dispute and is not designed to obstruct. A depot of this kind provides direct employment for drivers, loaders, security staff and site administration, and supports onward employment for

the transporters and traders who move material from the depot to retail and construction sites across the region. The purpose of this report is not to question that role but to make sure it continues in a way that keeps the depot's workers safe, its immediate neighbours undisturbed, and its operation compliant with the regulatory framework set out in section 1.4 below.

1.3 Scope and Structure of This EMP

This report is being issued in parts. The present part covers the preliminary pages and Chapter One, which explains why the EMP is being prepared and under what legal authority. The chapters that follow, once completed, will cover the facility description, baseline conditions, impact mitigation and monitoring plan, and implementation arrangements, as summarised in Table 1.1 below.

Table 1.1: EMP Report Structure and Chapter Summary

Chapter	Content
Chapter 1: Introduction and Regulatory Framework	Sets out the background to the depot, why this EMP is being prepared, the scope and structure of the report, the legal and regulatory framework governing the facility, and the objectives and terms of reference for the study.
Chapter 2: Facility Description and Site Setting	Detailed description of the depot's layout, infrastructure (fencing, gate, borehole, overhead tank, septic tank, soakaway, car park, loading bays), the site's location and physical setting, and its surroundings and sensitive receptors.
Chapter 3: Baseline Environmental and Social Conditions	Observed and measured baseline conditions at the depot and its surroundings, including ambient air quality, ambient noise, topography and drainage, and the social and institutional context (schools, hospital, market, banks and other facilities nearby).
Chapter 4: Impact Mitigation and Monitoring Plan	Identification of the environmental, social and occupational issues arising from the depot's ongoing operation, with practical mitigation measures, monitoring indicators, frequency and responsible parties, including the drivers/loaders facility, the convenience ventilation, and the catchment pit.
Chapter 5: Implementation Arrangements	Institutional roles and responsibilities, community consultation record, grievance redress mechanism, and emergency response procedures for the depot.

1.4 Legal and Regulatory Framework

The instruments listed in Table 1.2 govern the depot's operation and have directly shaped how this EMP has been put together. The mitigation and monitoring measures to be set out in Chapter Four are designed with compliance against each of these in mind.

Table 1.2: Legal and Regulatory Framework

Regulatory Instrument	Relevance to This Facility
Anambra State Environmental Management, Protection and Administration Law, 2024	Primary governing law for this EMP. Part 8 (sections 226 to 246) sets out the objectives of an Environmental, Social, Health and Safety Management Plan, its minimum content, and the requirement to register in the Public Registry maintained by the Ministry's Department of Ecology. Section 255 lists dust, fumes, accumulated matter and noise arising from trade or business premises as statutory nuisances, which is directly relevant to a depot with regular truck movement and bagged-material handling. Section 282 restricts the use of loudspeakers and public address systems in a manner that causes nuisance. Section 289 requires a permit for the storage of cement and similar materials in commercial areas, which applies squarely to a depot of this kind. Sections 79 to 81 require a landscaped setback and proper drainage provision around the tenement. Section 135 requires a covered dustbin and unobstructed drains at the premises and prohibits discharge of effluent into surrounding drains. Sections 136, 137 and 141 prohibit open burning of waste, require waste to be taken only to designated disposal sites, and require industrial or commercial liquid waste, oil and grease to be properly stored and disposed of rather than spilled or discharged untreated. Section 216 requires a wastewater clearance, or connection to the catchment sewage system, for facilities accommodating a population of fifty persons or more, which the depot's workforce should be checked against as staff numbers are confirmed in Chapter Two. Section 315 places a duty on the relevant authority to notify and consult the public before certain environmental decisions are taken, which supports the community engagement recorded in Chapter Five.
Environmental Impact Assessment Act, Cap E12, LFN 2004, and the EIA	Federal EIA framework. A storage and distribution depot of this scale is not named outright in the Fifth Schedule to the 2021 Regulations, so its categorisation (Category I, II or III) is a matter

Procedures and Charges Regulations, 2021	for the Federal Ministry of Environment to determine by screening against the criteria in Regulation 5, namely magnitude, duration and frequency, risk, significance, and the availability of mitigation measures. Given the depot's existing, largely built-up condition and its location within a commercial corridor rather than an environmentally sensitive area, it is reasonably expected to fall within Category II or III, subject to the Ministry's own screening decision. The Second Schedule to the 2021 Regulations sets out minimum content requirements for an EIA or EMP report, which this document is structured to satisfy as the remaining chapters are completed.
NESREA Act, 2007	Establishes the national environmental standards that apply to facilities of this kind across Nigeria. NESREA ambient air quality, noise and occupational standards are used as the reference limits for baseline monitoring in Chapter Three and the ongoing monitoring plan in Chapter Four.
National Environmental (Sanitation and Wastes Control) Regulations, 2009	Requires waste to be segregated, collected only by registered and licensed operators, and prohibits open dumping and on-site burning of waste, all of which apply to the depot's day-to-day waste handling.
FMEEnv National Ambient Air Quality and Noise Standards	Reference limits for particulate matter, gaseous pollutants and ambient noise, set out in Table 1.3 below, against which the baseline measurements in Chapter Three and the ongoing monitoring in Chapter Four will be checked.
National Environmental (Electrical/Electronic Sector) Regulations, 2011	Governs the end-of-life handling of batteries and electronic components. This becomes relevant once the solar-powered pump, CCTV and security lighting recommended for the depot are installed, as spent batteries from these systems must go to a licensed recycler rather than the ordinary waste bin.
World Bank ESS2 and ESS10	Used as international reference points rather than binding domestic law. ESS2 informs the occupational health and safety measures for depot workers, particularly the drivers and loaders whose rest facilities were found wanting during the site inspection. ESS10 informs the stakeholder engagement and grievance arrangements to be recorded in Chapter Five, given the depot's location among schools, a market, banks and a hospital.

Applicable numerical standards referred to in this report are brought together in Table 1.3 for ease of reference. Actual measured values against these limits will be presented once the baseline air

quality and noise survey for the depot, referred to in the data made available for this study, has been completed and analysed in Chapter Three.

Table 1.3: Applicable Environmental Standards and Numerical Limits

Parameter	Limit / Standard	Regulatory Source
PM10 (24-hour average)	116 $\mu\text{g}/\text{m}^3$	FMEnv National Ambient Air Quality Standards
PM2.5 (24-hour average)	25 $\mu\text{g}/\text{m}^3$	FMEnv / WHO
Nitrogen Dioxide, NO ₂	0.085 mg/m^3	FMEnv
Carbon Monoxide, CO	10 mg/m^3 (8-hour)	FMEnv
Daytime noise, commercial / light industrial corridor	60 to 70 dB(A) (indicative; to be confirmed against the applicable NESREA noise zone during the Chapter Three survey)	NESREA National Environmental (Noise Standards and Control) Regulations, 2009
Night-time noise, commercial / light industrial corridor	55 to 60 dB(A) (indicative, subject to the same confirmation)	NESREA National Environmental (Noise Standards and Control) Regulations, 2009
Drinking water pH (borehole supply)	6.5 to 8.5	WHO / NSDWQ 2015
E. coli in drinking water	0 cfu/100 mL (absent)	WHO / NSDWQ 2015
Wastewater/septic effluent pH	6.0 to 9.0	FMEnv Effluent Limitations
Electrical Conductivity (borehole supply)	1000 $\mu\text{S}/\text{cm}$ max	WHO / NSDWQ 2015
Total Dissolved Solids (borehole supply)	500 mg/L max	WHO / NSDWQ 2015

The noise figures above are shown as indicative ranges rather than a single confirmed limit because the exact NESREA noise zone classification for this stretch of the Onitsha-Enugu Expressway, whether treated as a commercial and light industrial zone or a mixed commercial/residential zone given the schools, hospital and market nearby, needs to be settled with a proper baseline noise survey rather than assumed. That survey, together with a comparable air quality assessment, is planned for Chapter Three and will be checked against both these ranges and any locally available prior studies of the area.

1.5 Objectives of This EMP

1. Impact Identification

To identify the environmental, social and occupational issues connected with the depot's ongoing operation, taking account of the truck loading and offloading activity, the storage of bagged materials, the size and condition of the drivers/loaders rest house and convenience, and the drainage problem at the inner part of the compound.

2. Mitigation

To set out mitigation measures that the proponent can reasonably carry out, whether by expanding the rest house and its convenience, properly siting a catchment pit clear of the truck movement areas, or adopting the solar-powered pump, CCTV and security lighting already recommended for the facility.

3. Monitoring

To establish a monitoring routine the depot's management can follow to check that the mitigation measures are working and to pick up any new problems before they turn into nuisances or regulatory breaches.

4. Regulatory Compliance

To show how the depot's operation lines up with the Anambra State Environmental Management, Protection and Administration Law, 2024, the Federal EIA Procedures and Charges Regulations, 2021, the NESREA Act, 2007, and the other instruments listed in Table 1.2.

5. Stakeholder Accountability

To record engagement with the depot's workers and neighboring stakeholders, including the arrangement already in place with St. Charles Borromeo Specialist Hospital, Onitsha, and to set out a grievance mechanism and clear institutional responsibilities for anyone raising a concern about the depot's operation.

1.6 Terms of Reference

This EMP has been prepared against a Terms of Reference derived from Part 8 of the Anambra State Environmental Management, Protection and Administration Law, 2024, and the Second Schedule to the Federal EIA Procedures and Charges Regulations, 2021. The Terms of Reference covers the following:

- I. A description of the depot as it presently stands, including its plot size, built area, and infrastructure such as the overhead tank, soakaway pit, septic tank, car park, fencing and gate, borehole, and truck loading and offloading areas.
- II. Baseline environmental and social conditions at and around the depot, based on site observation and, where available, air quality and noise measurement, and on the socio-economic character of the surrounding area, including nearby banks, schools, a market and a hospital.
- III. Identification of the environmental, social and occupational issues arising from ongoing depot operations, with particular attention to the two matters flagged for immediate attention: the undersized drivers / loaders facility and convenience, and the waterlogging at the inner part of the compound.
- IV. Practical mitigation measures for each issue identified, sized to what the proponent can reasonably implement, including the previously recommended solar-powered pump, solar-powered CCTV, solar-powered security lighting and a properly sited catchment pit.
- V. A monitoring framework specifying what is to be checked, how, how often, and by whom, for each significant issue.
- VI. A record of consultation with depot staff and, where relevant, with neighbouring stakeholders, in line with Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024.
- VII. A grievance redress mechanism that depot workers, visitors or neighbours can use throughout the depot's continued operation.
- VIII. Institutional responsibilities and emergency response procedures for the depot, including the existing arrangement with St. Charles Borromeo Specialist Hospital, Onitsha and the on-site first aiders.
- IX. An assessment of the depot's compliance with the applicable state and federal environmental regulations and standards set out in section 1.4 of this chapter.

CHAPTER TWO

FACILITY DESCRIPTION AND SITE SETTING

2.1 Facility Overview

Table 2.1 pulls together the depot's key characteristics as recorded during the May 2026 site visit. Individual features are described in more detail in section 2.5.

Table 2.1: Facility Overview and Key Characteristics

Facility Feature	Detail
Facility Name	HBM Nigeria Plc Depot, Onitsha (formerly Lafarge Depot, Onitsha)
Operator / Proponent	HBM Nigeria Plc, identified on depot safety signage as a member of the Huaxin group
Facility Address	Onitsha-Enugu Expressway, Ogidi, 434101, Idemili North Local Government Area, Anambra State
Land Tenure	Rented. The depot operates on a leased plot; the proponent does not own the land (see section 2.2)
Approximate GPS Coordinates	6°09'52.4"N, 6°51'20.1"E (site boundary, satellite imagery); general locality also referenced at 6°09'53.6"N, 6°51'17.8"E; Google Plus Code 5V74+R7M, Onitsha
Total Land Area	1,800 square metres
Built Area	674.82 square metres (approximately 37.49 percent of the plot)
Unbuilt / Open Compound Area	1125.18 square metres (approximately 62.51 percent of the plot), used for the truck yard, manoeuvring space, parking and circulation
Former Identity	Lafarge Depot, Onitsha, prior to the change of operator now reflected in the depot's branding and safety signage
Facility Function	Receipt, covered storage and truck-based dispatch of bagged building materials to customers within Anambra State and the wider eastern Nigeria market
Access	Direct frontage on the Onitsha-Enugu Expressway (A232), with a setback in front of the compound allowing trucks to pull in, turn and reverse into the yard rather than reversing directly off the carriageway
Electricity Supply	EEDC grid connection. Solar panels already observed mounted on the office block roof and on at least one yard light pole; extent of what these currently power was not confirmed during the visit

Water Supply	Borehole within the compound, presently run on a conventional pump; a solar-powered pump has been recommended but not yet installed
Sanitation	Septic tank and soakaway pit within the compound
Workforce Welfare Facilities	A rest house for drivers and loaders, with an attached convenience; both found undersized and poorly ventilated for the numbers using them (section 2.5.6)
Security	Perimeter fence topped with razor wire, a manned and gated entrance, no-smoking signage, and a marked muster point. CCTV and dedicated security lighting have been recommended but were not observed as installed
Occupational Health and Safety Organisation	Ten named fire marshals, three trained first aiders, a displayed Health, Safety and Environmental Policy and site rules, and a QR-linked "Safety in Motion" reporting programme (section 3.9.7)

2.2 Land Tenure and Operating Arrangement

The plot on which the depot sits is rented rather than owned by HBM Nigeria Plc. This detail changes how some of the recommendations elsewhere in this report should be read. A catchment pit, an expanded rest house, or a fixed CCTV and solar installation are all physical alterations to a property the proponent does not own outright, and a landlord's consent, and possibly a variation to the tenancy agreement, may be needed before some of them can go ahead.

No lease or tenancy document was made available for this study, so the term of the tenancy, its renewal conditions, and any clause restricting structural alteration of the premises could not be checked. This is recorded here as an open item rather than assumed either way. It is recommended that the proponent provide a copy of the current tenancy agreement, or a written note from the landlord, confirming that the physical works recommended in Chapter Four, in particular the catchment pit and the expansion of the drivers/loaders facility, may be carried out. Where the landlord is unwilling to permit permanent structural work, the mitigation plan in Chapter Four will need to include a fallback option built around what a tenant can do without altering the fabric of the building, such as portable or semi-permanent solutions.

None of this is a reason to hold off on registering this EMP or on fixing what can be fixed without landlord involvement, such as housekeeping, signage, waste handling and staff welfare arrangements that do not touch the structure of the premises. It does mean that the timeline for the

structural items in Chapter Four should allow for landlord consultation as a first step rather than assuming the proponent can proceed unilaterally.

2.3 Site Location and Physical Setting

The depot lies at Ogidi, in Idemili North Local Government Area of Anambra State, fronting directly onto the Onitsha-Enugu Expressway close to its junction with Nkwelle-Obeledu Road. On satellite imagery the depot's boundary, outlined in Figure 2.1 below, sits at approximately 6°09'52.4"N, 6°51'20.1"E, which corresponds to the Google Plus Code 5V74+R7M, Onitsha. This is consistent with the wider locality coordinate of 6°09'53.6"N, 6°51'17.8"E used to orient the site in Chapter One.



Figure 2.1: Satellite View Showing the Depot Boundary and Immediate Neighbours

The topography of the site itself is flat, and the compound is fully paved in concrete or compacted material, with no area of bare exposed ground. The depot's compound has no natural infiltration surface left to absorb rainfall, which is precisely why a properly built catchment pit, rather than reliance on the surrounding soil, is the right fix for the waterlogging problem described later in this report. The general area, being part of the Anambra lowlands close to the Niger trough, is not unusual in this respect; what matters more for this EMP is that the depot's own compound has no natural infiltration surface left to absorb rainfall, which is precisely why a properly built catchment pit, rather than reliance on the surrounding soil, is the right fix for the waterlogging problem described later in this report.

Aerial imagery reviewed for this study also shows what appears to be a watercourse a short distance to the east of the depot, on the far side of the expressway, part of the general drainage pattern that also feeds the Ogbunike cave and spring system a few kilometres to the north. The

exact distance from the depot boundary to this watercourse was not measured on the ground during the May 2026 visit and should not be taken as established from imagery alone; it is listed as an item to confirm in section 3.10. On the information available, the depot's paved surface and its planned catchment pit are expected to keep site runoff from reaching this watercourse in any event, since drainage from the compound is intended to be captured on site rather than discharged toward it.

Access to the depot is taken directly off the expressway. The frontage includes enough setback for an incoming truck to pull off the carriageway, turn, and reverse into the yard, rather than reversing directly from the live carriageway, which is a sensible existing arrangement rather than something this EMP needs to change. The expressway itself is a busy, mostly paved dual carriageway carrying a heavy mix of buses, private cars, motorcycles and other haulage trucks, with informal roadside parking and trading along parts of its length near the depot; this has a direct bearing on the noise baseline recorded in section 3.5.

2.4 Site Surroundings and Sensitive Receptors

The depot sits within a dense, mixed commercial and light industrial corridor rather than a quiet residential one. Table 2.2 lists the named neighbours identified from satellite imagery and the site visit, organised by their position relative to the depot. Distances are approximate, read off the imagery rather than measured on the ground, and are given as a general guide to proximity rather than a survey-grade figure.

Table 2.2: Site Surroundings and Sensitive Receptors

Direction	Named Neighbours / Features	Note on Sensitivity
Immediately adjoining / fronting the depot	OPay office (shares the immediate frontage); Macdon Industries and Origin Steel & Design Limited (adjoining plots); UBA (United Bank of Africa) branch close to the frontage	Commercial and light industrial neighbours immediately at the fence line; low sensitivity to dust and noise but close enough that ordinary good housekeeping still matters
Directly across the expressway	Nwanyi Nando Restaurant; a "Building Materials" retail outlet; Blessed Ucheson waterline (sachet/table water business); Onyeeze Shopping Plaza further along	Food and water-handling businesses across the road are a reasonable receptor for dust nuisance during truck loading and should be considered in the dust mitigation measures in Chapter Four

North along the expressway / Nkwelle-Obeledu Road (approx. 150 to 300 m)	Jay Jay & Co; Franklin Marble Industry; Cedar View International School; St. Mathew's Anglican Church; further out, JELE Paints and Chemicals, GUO Transport Onitsha Head Office and a mechanic trucks workshop	Cedar View International School is the nearest identified school and the most sensitive receptor for both noise and dust in this direction; its distance is close enough to warrant attention in the monitoring plan
South and west	St. John's Anglican Church, Ogidi; Olive Garden Real Estate; Ecobank branch; Access Bank Plc, Ogidi branch, a short distance further down the expressway	Places of worship and banking halls are moderately sensitive to noise, particularly during service times, though set back somewhat from the immediate frontage
East, across the expressway (further distance)	Mapotex Groups; Tuff Bathrooms (bathroom supply store); Harmony Place (building materials store); Focus Flow (plumbing materials store); St. Thomas Anglican Church; Saint Stephen Catholic Church	Further building-materials and plumbing-supply businesses reinforce that this corridor already functions, in part, as a local market for construction materials, of which the depot is one part rather than an isolated intrusion
Further afield (not mapped precisely)	St. Charles Borromeo Specialist Hospital, Onitsha (engaged by the depot for medical emergencies)	Distance not established in this study; relationship is operational (referral arrangement) rather than one of physical proximity, so it is treated in Chapter Three under the social baseline rather than as a nearby receptor

Two things follow from this table. First, because the depot's immediate neighbours on most sides are themselves commercial or light industrial operations, a NESREA noise-zone classification of "commercial and light industrial" for this stretch of road, rather than "residential" or "rural", is reasonable, and the noise standard in Table 1.3 should be read on that basis pending formal confirmation. Second, the presence of a school (Cedar View International School) and several churches within a few hundred metres, even though they are not immediately adjacent, means the depot cannot treat itself as operating in a purely industrial setting either. The mitigation measures in Chapter Four should reflect both realities rather than defaulting to either extreme.

2.5 Facility Infrastructure and Layout

The depot's infrastructure, as observed during the May 2026 site visit, is summarised in Table 2.3 and described feature by feature in the subsections that follow.

Table 2.3: Facility Infrastructure Summary

Infrastructure	Condition Observed	Comment
Perimeter fence and gate	Fenced on all sides with razor wire along the top; gated, manned entrance facing the expressway	Adequate as observed; no action recommended
Truck loading/offloading yard	Paved, marked with yellow demarcation lines; wheel stoppers/parking blocks in places	Functional; drainage falls toward the low corner discussed in section 3.3
Storage warehouse	Steel-framed, corrugated-sheet warehouse; palletised storage of bagged product; wall-mounted extractor fans	Structurally sound as observed; dusty floor consistent with bagged-material handling
Overhead tank and borehole	Borehole present within the compound, feeding an overhead tank; pump presently conventional (grid-powered), not solar	Solar-powered pump recommended but not yet installed
Septic tank and soakaway pit	Present within the compound	Condition and capacity not inspected internally; recommend confirming last desludging date
Drivers/loaders rest house and convenience	Small rest house with an attached convenience; window to the convenience undersized, ventilation poor	Flagged for priority attention; see section 2.5.6
Waste bin	Covered wheeled bin positioned within the compound	Adequate as observed; collection frequency and contractor not confirmed
Car park	Paved parking area within the compound	Adequate as observed
Fire safety and signage	Fire extinguishers at multiple points, marked muster point, no-smoking signage, ten named fire marshals	Well established; maintain inspection and recharge schedule for extinguishers
CCTV and security lighting	Not observed as installed at the time of the visit	Recommended addition, solar-powered, not yet in place

2.5.1 Perimeter Fence, Gate and Security

The compound is enclosed on all sides, with the perimeter wall topped with razor wire and a single gated, manned entrance facing the expressway. No-smoking signage is displayed at more than one point in the yard, and a marked muster point sits close to the fire point near the gate. This arrangement is adequate as observed and it is recorded here mainly to confirm that the security and access-control basics are already in place, which is a reasonable starting point for the more specific improvements recommended elsewhere in this report.



Plate 2.1: Perimeter Wall Showing Fire Point and Muster Point Signage

2.5.2 Truck Loading, Offloading and Circulation Areas

The truck yard occupies most of the depot's open compound space and is fully paved, with yellow demarcation lines marking out parking, loading and pedestrian areas, and yellow-painted wheel stoppers or kerb blocks positioned in front of the office block. Trucks observed on site during the visit included an articulated haulage vehicle with tarpaulin-covered cargo and a smaller rigid truck, both parked within the marked yard rather than obstructing the expressway. The general standard of demarcation and housekeeping in the yard is reasonable; the specific concern in this part of the compound is the drainage fall toward the low corner described in section 3.3, which needs a catchment pit sited clear of the truck movement and turning paths.



Plate 2.2: General View of the Depot Yard, Office Block and Truck Bay



Plate 2.3: Covered Waste Bin at the Depot Frontage

2.5.3 Storage Warehouse

The main storage building is a steel-framed structure with a high pitched roof and corrugated metal cladding, painted in the depot's house colours on the lower courses. Internally, bagged product is stored on wooden pallets stacked against the side walls, leaving a clear working floor down the centre for forklift or hand-truck movement. Wall-mounted extractor fans are fitted along both long walls to help with ventilation, and the floor, while structurally sound, carries a visible film of fine dust consistent with the ordinary handling of bagged material rather than any particular fault in the building. No mechanical dust extraction was observed at the point where bags are opened, stacked, or loaded, which is worth noting for the dust-control measures to be developed in Chapter Four.



Plate 2.4: Interior of the Storage Warehouse with Palletised Stock

2.5.4 Water Supply: Borehole and Overhead Tank

The depot draws its water from an on-site borehole, pumped to an overhead tank for gravity-fed distribution around the compound. The pump presently in use is conventional and grid or generator powered rather than solar; a solar-powered pump has already been recommended for the site, in line with the depot's evident interest in solar infrastructure elsewhere (the office roof and at least one yard light already carry solar panels), but this particular upgrade had not been carried out as at the time of the May 2026 visit. A water sample was subsequently drawn from the borehole and tested, the result is reported in section 3.6.

2.5.5 Sanitation: Septic Tank and Soakaway Pit

Sanitation for the depot is handled by a septic tank and soakaway pit within the compound. Neither structure was opened for internal inspection during the visit, so their condition and remaining capacity cannot be reported on directly. It is recommended that the proponent confirm the date of last desludging and the design capacity relative to current staff numbers, since Section 216 of the Anambra State Environmental Management, Protection and Administration Law, 2024 requires a wastewater clearance, or connection to the catchment sewage system, once a facility's population reaches fifty persons, a threshold this depot's workforce should be checked against once headcount is confirmed (see section 3.9.3).

2.5.6 Drivers/Loaders Rest House and Convenience

This is the single infrastructure item most clearly flagged during the site visit as needing attention. The rest house provided for drivers and loaders is small relative to the numbers who use it at any one time, and its attached convenience has a window too small to ventilate the space properly. The photograph below shows the external wall of this facility, including the narrow, louvre-style window in question. On a warm afternoon, and with the door likely to be kept shut for privacy, a space this poorly ventilated is uncomfortable to use and, over time, is the kind of condition that pushes people toward avoiding the facility altogether, which is its own hygiene problem. This is treated in Chapter Four as a priority corrective item, subject to the landlord consultation described in section 2.2.



Plate 2.5: Drivers/loaders Facility Showing the Undersized Convenience Window

2.5.7 Waste Bin and Solid Waste Handling

A covered, wheeled waste bin is positioned within the compound for general refuse. It appeared to be in reasonable condition and properly covered at the time of the visit. What was not confirmed is who collects it, how often, and whether that collector is licensed as required under the Anambra

State Waste Management Authority framework and Section 137 of the Anambra State Environmental Management, Protection and Administration Law, 2024, which requires waste to go only to a designated disposal site. This is recorded as an item to confirm rather than a fault, since the bin itself and its placement were both satisfactory as observed.

2.5.8 Electricity Supply and Existing Solar Installations

The depot's main electricity supply is from the EEDC grid. Solar panels were observed already mounted on the roof of the two-storey office block and on at least one freestanding light pole in the yard, though what each of these currently powers, whether general lighting, the office block, or something more specific, was not established during the visit. This existing investment in solar infrastructure is a reasonable base to build on when the recommended solar-powered borehole pump, CCTV and dedicated security lighting are eventually added, rather than a separate system being introduced from nothing.

2.5.9 Fire Safety, Signage and Emergency Preparedness

Fire extinguishers are positioned at more than one point around the compound, with a marked muster point close to the main fire point near the gate. The depot maintains a Health, Safety and Environmental noticeboard, described more fully in section 3.9.7, listing ten named fire marshals, emergency call numbers for the depot manager and safety officer, and the standing arrangement with St. Charles Borromeo Specialist Hospital, Onitsha. This level of organisation is well ahead of what a facility of this size is typically expected to have in place, and the main recommendation here is simply to keep extinguisher inspection and recharge records current and to confirm that all ten listed fire marshals remain active staff.

2.5.10 Car Park

A paved car park area is provided within the compound, separate from the main truck loading yard. It was adequate as observed and is not an area requiring corrective action in this report.

2.6 Operational Profile

Based on the site visit and the vehicles and activity observed, the depot's day-to-day operation follows the pattern typical of a bagged-materials distribution point: incoming trucks check in at the gate, pull off the expressway into the yard, and either offload bagged product into the

warehouse or load outgoing product for dispatch to customers. Loading and offloading were not underway at the time the air quality readings in Chapter Three were taken, which is an important qualification carried forward into that chapter, since dust levels during active bag handling and truck movement are likely to run higher than the readings recorded on a quieter part of the day. Office-based staff handle documentation and dispatch administration from the two-storey block at the front of the compound, while drivers and loaders make use of the rest house discussed in section 2.5.6 between assignments. A fuller, time-stamped account of the depot's operating hours and daily throughput was not available for this study and would usefully sharpen the monitoring plan in Chapter Four.

CHAPTER THREE

BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

3.1 Introduction and Approach

This chapter records what was actually observed, measured and gathered about the depot and its surroundings during the May 2026 site visit, rather than predicted conditions.

The socio-economic baseline was not gathered through primary fieldwork such as household surveys, business questionnaires, focus groups or census review as the site is fully operational already. It was gathered from four indirect source: direct site observation and photography; two portable instruments carried during the visit, a hand-held air quality detector reading formaldehyde (HCHO), total volatile organic compounds (TVOC), PM2.5, PM10, carbon monoxide and carbon dioxide, and a smart-based sound level meter reading LAeq, Lmax, LCpeak and time-weighted average (TWA) noise; a review of satellite imagery and mapped points of interest around the site; and the depot's own on-site Health, Safety and Environmental documentation. Readings from the first two sources were taken at points within the depot yard rather than at a fixed, surveyed monitoring grid, and were not repeated across different times of day or across wet and dry conditions. They are presented here as a genuine snapshot of conditions on the day, not as a substitute for the fuller, repeated monitoring programme ordinarily expected to support an EIA-grade baseline. Where a figure could not be obtained during this visit, that is stated plainly rather than estimated, and carried forward as a data gap in section 3.10.

One qualification applies across the whole of section 3.4: the depot was not engaged in active truck loading or offloading while the air quality readings were being taken. This matters because dust and particulate levels during active bag handling and vehicle movement can reasonably be expected to run higher than what was recorded during a quieter period. The readings below should therefore be read as a floor rather than a ceiling on the depot's air quality footprint.

3.2 Climate and Meteorology

Ogidi, in common with the rest of Anambra State, has a tropical climate with two clearly marked seasons: a wet season running roughly from April to October, and a dry season from November to March, the latter carrying the dry, dust-laden harmattan wind out of the northeast typically between

December and February. Annual rainfall in this part of Anambra State is generally in the range of 1,800 to 2,000 millimetres, concentrated heavily in the wet season months, with July and September typically the wettest. Average temperatures sit in the high twenties to low thirties Celsius through most of the year, with the harmattan period bringing cooler nights and reduced humidity alongside the dust it carries. Prevailing wind direction shifts seasonally: broadly southwesterly during the wet season and northeasterly during the harmattan. This seasonal reversal is directly relevant to dust dispersion from the depot, since the direction in which fugitive dust from loading and offloading is likely to travel toward neighbouring premises changes with the season, and the mitigation and monitoring plan in Chapter Four should account for both wind regimes rather than only one.

No dedicated meteorological instrument was deployed during the May 2026 visit; the description above is drawn from the general climatic record for the Anambra region rather than an on-site weather station, and is offered as reasonable regional context rather than site-specific measurement.

3.3 Geology, Soils, Topography and Drainage

The depot's compound is flat and fully paved in concrete or compacted material, leaving no area of bare exposed ground within the fence line. Despite this, a section at the inner part of the compound was visibly waterlogged at the time of the visit, with standing moisture evident even during a dry spell. This patch sits low relative to the surrounding paved surface, and because the paving leaves no infiltration surface, rainfall draining to this point has nowhere to go except to sit and slowly evaporate, which is precisely the condition a properly built catchment pit is meant to correct.

No soil sample was taken or laboratory-tested for this study, since the compound is fully paved and there was no accessible area of undisturbed natural ground anywhere on site. The ponding observed at the low corner is therefore attributable to the absence of any infiltration surface and the lack of a drainage outlet, rather than to the character of the underlying soil, which was not exposed for inspection. A simple percolation test at the proposed catchment pit location, ahead of construction, is recommended in section 3.10 and would confirm whether on-site infiltration is feasible or whether the pit needs to be lined and pumped.

More broadly, Ogidi and the wider Idemili North area sit within the coastal plain sands and lateritic soils typical of the Anambra lowlands bordering the Niger trough, a geology that elsewhere in the state is associated with gully erosion where vegetation cover is stripped and runoff is left uncontrolled. The depot's own compound, being paved over rather than exposed, is not itself at meaningful risk of gully formation, but uncontrolled runoff leaving the compound onto the surrounding, less-paved ground could contribute to that wider regional problem if not properly captured, which is a further reason the catchment pit recommendation in Chapter Four matters beyond the depot's own fence line.

3.4 Ambient Air Quality

Three air quality readings were taken within the depot yard during the May 2026 visit using a hand-held air quality detector, with the depot not actively loading or offloading at the time. Table 3.1 sets out the readings against the FMEnv/WHO reference limits already listed in Table 1.3.

Table 3.1: Baseline Ambient Air Quality Readings

Reading	HCHO (mg/m ³)	TVOC (mg/m ³)	PM2.5 (µg/m ³)	PM10 (µg/m ³)	CO2 (ppm)
Point 1, depot yard	0.077	0.224	10	16	899
Point 2, depot yard	0.00	0.00	13	18	838
Point 3, depot yard	0.016	0.047	17	25	569
FMEnv / WHO reference limit	no FMEnv limit used here	no FMEnv limit used here	25 (24-hr average)	116 (24-hr average)	no ambient limit (~1,000 indoor comfort reference)

On these three readings, PM2.5 and PM10 both sit comfortably within the FMEnv reference limits carried over from Table 1.3, and carbon monoxide was recorded at or near zero at every point. Formaldehyde and TVOC readings were low in absolute terms, and CO2 readings, while somewhat above the roughly 400 to 420 ppm typical of open outdoor air, remained well short of the level at which indoor air quality guidance generally begins to raise concern; the values recorded are more consistent with a work yard where vehicles and people are present than with any specific pollution source. None of this should be read as a clean bill of health for the depot's air quality overall, for the reason given in section 3.1: these readings were taken without active loading or offloading underway, and the FMEnv PM10 and PM2.5 limits above are precisely the ones that

matter most once dust-generating activity resumes. A repeat set of readings taken during active bag handling and truck movement, ideally at the warehouse door and at the compound boundary nearest the neighbouring businesses identified in Table 2.2, would give a fuller and fairer picture and is recommended as part of completing this EMP.

3.5 Ambient Noise Environment

Three noise readings were taken during the site visit using a smart-based sound level meter, at three distinct points within the depot: the gated entrance facing the expressway, the middle of the truck yard, and the extreme inner end of the compound. Table 3.2 sets out the readings alongside the indicative FMEnv/NESREA range for a commercial and light industrial corridor already introduced in Table 1.3.

Table 3.2: Baseline Ambient Noise Readings

Monitoring Point	LAeq dB(A)	Lmax dB	LCpeak dB	TWA dB	FMEnv/NESREA (Commercial/Light Industrial)	Observation
Point 1. Gated entrance, facing expressway	68.9	70.4	74.2	76.3	60 to 70 dB(A)	HIGH, above range; closest to expressway traffic
Point 2. Middle of truck yard	64.2	67.7	71.5	74.1	60 to 70 dB(A)	MODERATE, above range
Point 3. Extreme inner end of compound	57.5	63.1	65.8	68.2	60 to 70 dB(A)	NORMAL to MODERATE

Note: LAeq is the equivalent continuous sound level, Lmax is the highest recorded sound level, LCpeak is the peak C-weighted level, and TWA is the time weighted average over the monitoring period

The three LAeq readings show a clear gradient across the site. The highest was recorded at the gated entrance, at 68.9 dB(A), the point closest to the live expressway carriageway and therefore the most exposed to passing traffic. The middle of the truck yard recorded 64.2 dB(A), intermediate between the entrance and the inner end. The extreme inner end of the compound recorded 57.5 dB(A), the lowest of the three, being furthest from the road. Taken against the indicative 60 to 70 dB(A) daytime range used in Table 1.3, the entrance and mid-yard points sit above the lower bound and within or close to the upper bound of the range, while the inner end sits below the range

entirely. This gradient is itself a useful finding: it confirms that the dominant noise source is the expressway and its traffic, rather than the depot's own plant or truck movements alone, and it means that depot workers who spend most of their time in the inner yard are exposed to noticeably lower noise levels than the entrance figure alone would suggest. The TWA readings at all three points are higher than the corresponding LAeq and Lmax figures, which suggests the averaging windows captured brief, louder events, most plausibly passing truck horns, reversing alarms, or heavy vehicles changing gear close to the measurement points, rather than sustained conditions. Spot readings cannot on their own tell the difference between a one-off spike and a recurring pattern, so these figures are flagged rather than treated as settled.

Two follow-up points are recommended rather than concluded here. First, a longer monitoring run, ideally covering a full working shift with the depot actively loading and offloading, would establish whether the readings above are typical or were themselves influenced by passing events, and would allow a proper time-weighted exposure figure to be calculated for workers who spend a full shift in the yard rather than the brief periods these readings cover. The full-shift study should take readings at the same three points (entrance, mid-yard, inner end) so that the gradient observed during this visit can be confirmed or revised. Second, if a fuller survey confirms sustained exposure approaching or exceeding the 85 dB(A) region generally used as an occupational action level, hearing protection for yard-based staff becomes a discussion for Chapter Four rather than an optional extra. Neither conclusion is drawn from the single reading available; both are set out here as the reasonable next step.

3.6 Groundwater and Water Supply

The depot's water supply comes from an on-site borehole, described in section 2.5.4. A borehole water sample was drawn and tested against NSDWQ 2015 parameters. pH returned 5.08, below the 6.5–8.5 range, marking the water as acidic and liable to affect taste and corrode metal pipework and fittings over time. Electrical conductivity (103 µS/cm) and total dissolved solids (52 ppm) both passed, well under the NSDWQ ceilings of 1000 µS/cm and 500 ppm respectively. E. coli, iron and nitrate were not part of this round of testing and remain open if a fuller panel is still wanted. A pH-neutralising filter or dosing unit is recommended (section 4.3), with a follow-up test once installed to confirm it works.

Table 3.5: Borehole Water Quality Results Against NSDWQ 2015 Limits

Parameter	Site Result	NSDWQ 2015 Limit	Compliance	Reference
pH	5.08	6.5 - 8.5	Fails, below range (acidic)	WHO / NSDWQ 2015
Electrical Conductivity, EC (µS/cm)	103	1000 max	Passes	WHO / NSDWQ 2015
Total Dissolved Solids, TDS (ppm)	52	500 max	Passes	WHO / NSDWQ 2015
Salinity (ppm)	52	No specific limit; read against TDS	Passes (TDS basis)	—
Salt content (%)	0.00	No specific limit	Not applicable	—

3.7 Soil Conditions

As set out in section 3.3, the depot's compound is fully paved throughout, including the waterlogged section at the inner part of the compound. No area of exposed natural ground was identified during the visit, and no laboratory soil test was conducted. The practical soil-related concern at this site is therefore not contamination but drainage: the paving leaves no infiltration surface, and the low corner where water collects has no outlet, which is why water ponds there rather than running off or soaking away. This observation feeds directly into the catchment pit design recommended in Chapter Four rather than standing as a separate soil quality issue requiring its own remediation.

3.8 Flora and Fauna

Given the depot's fully built and paved character, there is no natural vegetation of note within the compound itself beyond a small number of ornamental potted plants placed along the building frontage. The surrounding area, as described in Table 2.2, is a dense commercial and light industrial corridor with sparse street trees rather than any significant tree cover, farmland or natural habitat immediately adjacent to the site. No protected or notable wildlife species, and no sign of any, were observed during the visit. The site is not within, and does not appear from available mapping to be adjacent to, any of the Environmentally Sensitive Areas listed in the Fifth Schedule to the Federal EIA Procedures and Charges Regulations, 2021, such as wetlands, forest reserves,

coral reefs or designated conservation areas. Flora and fauna are accordingly not treated as a significant baseline consideration for this depot, beyond the general point that the depot's drainage should not be allowed to degrade conditions for whatever vegetation exists along the wider drainage line noted in section 2.3.

3.9 Socio-Economic and Institutional Baseline

3.9.1 Land Use and Community Character

The immediate corridor along the Onitsha-Enugu Expressway at this point in Ogidi is unambiguously commercial and light industrial in character, as the density of named businesses in Table 2.2 shows: industrial operations (Macdon Industries, Franklin Marble Industry, Origin Steel & Design Limited, JELE Paints and Chemicals), banking halls (UBA, Access Bank, Ecobank), a haulage transport head office and an associated mechanic workshop, a restaurant, a water-vending business, a shopping plaza, and several other building-materials and plumbing-supply outlets. Residential development and institutional uses, including Cedar View International School and a number of churches of different denominations, sit a short distance back from this immediate frontage rather than directly on it. This pattern, a commercial ribbon along the expressway with residential and institutional land use set back behind it, is typical of Nigerian trunk road frontages of this kind and supports treating the depot's noise and dust context as predominantly commercial rather than residential, while still keeping an eye on the nearer institutional receptors identified in Table 2.2.

3.9.2 Economic Character and Livelihoods

The corridor's economy is heavily tied to the building trade: marble, steel, paint and chemicals, plumbing supplies, and general building materials outlets all appear within a few hundred metres of the depot, alongside the depot's own bagged-materials business. This suggests the depot is one node within an established local materials market rather than an unusual or out-of-place use of the land, and that a reasonable share of the corridor's livelihoods, from shop owners to loaders to haulage drivers, are already bound up with the same trade the depot serves. Road traffic observed during the visit, heavy with commercial vehicles, motorcycles used for short-haul goods movement, and general passenger transport, is consistent with a working commercial corridor rather than a purely residential street.

3.9.3 Employment Generated by the Depot

The depot's own Health, Safety and Environmental noticeboard lists ten named fire marshals and identifies at least one of three trained first aiders by name, which is indirect but reasonably firm evidence of a workforce running to at least a dozen or more people on site at any time, once security, office and management staff are added to the drivers and loaders who use the rest house discussed in section 2.5.6. An exact, current headcount was not made available for this study. This matters for two reasons beyond simple curiosity: first, Section 216 of the Anambra State Environmental Management, Protection and Administration Law, 2024 sets a wastewater clearance requirement once a facility's population reaches fifty persons, and the depot's actual headcount needs to be checked against that threshold; second, the sizing of the rest house and convenience discussed in section 2.5.6 can only be properly assessed against a real number of regular users rather than an estimate. Obtaining a current staff and regular-visitor headcount from the proponent is recommended in section 3.10.

3.9.4 Institutional and Social Infrastructure Nearby

Within a short distance of the depot are at least three bank branches (UBA, Access Bank, and Ecobank), one identified international school (Cedar View International School), and a number of churches spanning Anglican, Catholic and other denominations (St. Mathew's Anglican Church, St. John's Anglican Church Ogidi, St. Thomas Anglican Church, Saint Stephen Catholic Church, among others named on the map reviewed for this study). A shopping plaza (Onyeeze Shopping Plaza) provides a general retail and market-type function in the same corridor. For medical emergencies, the depot maintains a standing arrangement with St. Charles Borromeo Specialist Hospital, Onitsha, rather than relying solely on its own first aiders, though the exact distance and travel time to that hospital from the depot was not established during this visit and is worth confirming as part of the emergency response procedures to be set out in Chapter Five.

3.9.5 Traffic and Access

The Onitsha-Enugu Expressway at this point carries a heavy and constant mix of buses, private cars, motorcycles and other haulage trucks, with informal roadside parking and trading narrowing the effective carriageway in places near the depot frontage. This general traffic condition, rather than the depot's trucks alone, is the dominant contributor to the noise levels recorded in section 3.5, and it is worth the depot's management being able to point to this baseline when discussing

noise concerns with neighbours or regulators, since it distinguishes background road noise from noise the depot's own operation adds on top of it. The depot's own truck movements are a contributor to, rather than the sole source of, road-related nuisance along this stretch.

3.9.6 Land Tenure and Community Consultation

As recorded in section 2.2, the depot's plot is rented rather than owned. No separate landowning family or community group was identified or engaged as part of this initial study, consistent with the depot's location within an already-developed commercial corridor rather than on previously undeveloped land. Formal notification of immediate business neighbours, in line with the consultation duty at Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024, has not yet been carried out as part of this EMP and is planned as part of the implementation arrangements to be set out in Chapter Five.

3.9.7 Occupational Health and Safety Baseline

The depot maintains a more developed occupational health and safety programme than a facility of this size is typically expected to have. A dedicated noticeboard, reproduced in Plate 3.1 below, displays a Health, Safety and Environmental Policy setting out four commitments (managing risk, engaging stakeholders and contractors, continuous improvement, and maintaining stakeholder trust), together with a set of site rules covering the authority to stop unsafe work, personal protective equipment, control of critical risks, staying out of the line of fire, a work-permit system, safe driving, a drugs-free workplace, and general operational compliance. Table 3.3 summarises what this noticeboard, and the wider site visit, found in place.



Plate 3.1: Health, Safety and Environmental Noticeboard at the Depot

Table 3.3: Existing Occupational Health, Safety and Environmental Provisions

Provision	Detail Observed
Health, Safety and Environmental Policy	Displayed on-site, setting out risk management, stakeholder engagement, continuous improvement and trust-building commitments
Site safety rules	Eight-point rule set covering unsafe work stoppage, PPE, critical controls, line of fire, work permits, safe driving, drug-free workplace and operational compliance
Fire marshals	Ten named staff listed on the "Onitsha Depot Fire Marshals" noticeboard poster
First aiders	Three trained first aiders reported on site; at least one identified by name and phone number on the noticeboard
Emergency call arrangements	Direct phone lines displayed for the Depot Manager and the Safety Officer, plus a separate emergency contact list by role (Depot Safety Officer, H&S Manager, Depot Officer)

External medical arrangement	Standing arrangement with St. Charles Borromeo Specialist Hospital, Onitsha for medical emergencies
Digital safety reporting	QR-code linked "Safety in Motion" programme, consistent with a group-wide safety system under the Huaxin group identified on the depot's signage
Drivers / loaders welfare facility	Present but undersized, with a poorly ventilated attached convenience (see section 2.5.6); the one clear gap in an otherwise well-organised OHS setup

Read together, this table shows a depot with a genuinely functioning safety culture on paper and on the wall, backed by named individuals with real phone numbers rather than generic notices. The one clear shortfall against this otherwise strong picture is the physical welfare facility for drivers and loaders, which sits oddly against a site that otherwise takes documented safety seriously. Chapter Four should treat closing this one gap as bringing the depot's physical welfare provision up to the same standard as its documented safety programme, rather than as an isolated complaint.

3.9.8 Nearby Water Feature and Wider Drainage Sensitivity

As noted in section 2.3, imagery reviewed for this study suggests a watercourse a short distance east of the depot, on the far side of the expressway, forming part of the wider drainage system associated with the Ogbunike cave and spring area to the north. This has not been confirmed by ground survey and its exact distance from the depot is not established. It is treated here as a reasonable prompt to keep the depot's own runoff contained on site, through the catchment pit recommended in Chapter Four, rather than as a confirmed sensitive receptor requiring its own dedicated monitoring at this stage.

3.10 Summary of Baseline Findings and Data Gaps

Table 3.4 draws together what this chapter has established with reasonable confidence and what remains open. Chapter Four's mitigation and monitoring plan will need to address both columns: fixing what is already known to be a problem, and closing the specific gaps identified here before the depot's compliance position can be called complete.

Table 3.4: Summary of Baseline Findings and Data Gaps

Topic	Established in This Study	Still to Be Confirmed
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Air quality	Three spot readings within FMEnv PM2.5/PM10 limits, taken without active loading	Readings during active loading and offloading; boundary-point readings near neighbouring businesses
Noise	Three LAeq readings: 68.9 dB(A) at the gated entrance (HIGH), 64.2 dB(A) mid-yard (MODERATE), 57.5 dB(A) inner end (NORMAL to MODERATE), showing a clear gradient from road-facing entrance to inner yard	Full-shift monitoring at the same three points; confirmation of NESREA noise zone classification for this stretch of road
Soil/drainage	Waterlogged patch identified and visually assessed as slow-draining	Percolation test at the proposed catchment pit location
Workforce numbers	Ten named fire marshals and at least one named first aider confirm a meaningful on-site workforce	Current total headcount, checked against the fifty-person threshold in Section 216 of ASEPAL 2024
Land tenure	Confirmed that the depot operates on rented, not owned, land	Copy of the tenancy agreement or landlord's written consent for structural works
Sanitation infrastructure	Septic tank and soakaway pit present	Date of last desludging and remaining capacity
Nearby watercourse	A watercourse appears in aerial imagery east of the site	Ground-surveyed distance and confirmation of hydrological connection, if any, to depot drainage

CHAPTER FOUR

IMPACT MITIGATION AND MONITORING PLAN

4.1 Introduction and Approach

This mitigation turns Chapter Three findings into action. For every issue identified during the May 2026 site visit, whether already confirmed as a problem or still an open data gap, this chapter sets out what should be done about it, how progress will be checked, how often, and who is responsible. Two kinds of item run through the chapter side by side. The first are priority corrective actions: the drivers/loaders facility and the waterlogged corner of the compound, both already established in Chapters Two and Three as needing attention rather than routine monitoring. The second are ongoing operational measures: the ordinary, ongoing management of dust, noise, water, sanitation, waste and worker safety that keeps a depot of this kind compliant and reasonably good to its neighbours, much of which the depot is already doing reasonably well and simply needs to keep doing, checked and recorded rather than left to habit.

A number of the actions below are also how the data gaps left open in Table 3.4 finally get closed. The borehole water test, the percolation test at the proposed catchment pit site, the full-shift noise study, and the headcount confirmation are not separate exercises sitting outside this EMP; they are line items in this chapter's own monitoring programme, and until they are done, this EMP should be read as provisional on those points rather than complete.

As set out in section 2.2, the depot operates on rented land, and several of the physical works recommended in this chapter, the catchment pit, the rest house expansion, and the solar installations, are alterations to a property the proponent does not own. Section 4.9 sets out how that is handled. Nothing in this chapter should be read as assuming landlord consent has already been given where it has not.

4.2 Summary Mitigation and Monitoring Matrix

Table 4.1 brings together every issue carried forward from Chapters Two and Three in one place. The narrower sections that follow (4.3 to 4.9) expand on the items that need more explanation than a single table row allows.

Table 4.1: Summary Mitigation and Monitoring Matrix

Issue	Mitigation Measure	Monitoring Indicator / Frequency	Responsible Party
Undersized drivers/loaders rest house and poorly ventilated convenience	Expand or reconfigure the facility to comfortably fit typical shift numbers; enlarge the convenience window or fit an extractor fan, subject to landlord consent (section 4.9)	Completion of works; periodic worker feedback check; one-off then reviewed quarterly	Depot Manager, with Safety Officer sign-off
Waterlogged section at the inner part of the compound	Carry out a percolation test, then construct a properly sited catchment pit clear of truck paths and set back from the borehole, subject to landlord consent	Visual check after rainfall; standing water no longer present; after every significant rain event and a monthly general sweep	Depot Manager / Safety Officer
Fugitive dust from bag handling, loading, offloading and the warehouse floor	Damp down dusty yard surfaces in the dry season, sweep up spillage promptly, issue dust masks to bag handlers, review extractor fan coverage in the warehouse	Repeat air quality readings at the warehouse door and at the compound boundary during active loading; quarterly and at the onset of harmattan	Safety Officer
Ambient and operational noise (57.5–68.9 dB(A) LAeq recorded across three points, with the entrance and mid-yard above the lower bound of the indicative daytime range)	Routine vehicle and generator maintenance, discourage unnecessary horn use and idling in the yard, carry out a full-shift noise dosimetry study sampling the same three points	Boundary noise spot-check quarterly at the same three points (entrance, mid-yard, inner end); one-off full-shift study to confirm worker exposure	Safety Officer
Septic tank/soakaway capacity and the Section 216 population threshold	Confirm current on-site headcount, confirm the date of last desludging, arrange licensed desludging as needed, register a wastewater clearance with the Ministry if the fifty-person threshold is met	Headcount register; desludging record; headcount checked quarterly, desludging as indicated	Depot Manager / HR

Solid waste handling and disposal	Confirm the waste collector is licensed and registered with the Anambra State Waste Management Authority; keep the bin covered; no open burning on site	Waste collection receipts/manifest; monthly review	Depot Manager
Storage permit for cement and bagged building materials (Section 289, ASEPAL 2024)	Confirm the required storage permit is in place with the Ministry, or apply for it if not, and keep it current	Permit on file and within validity; checked annually	Depot Manager / Compliance
Occupational exposure to noise, dust and manual handling	Extend PPE issuance to include dust masks and hearing protection where monitoring indicates a need; keep toolbox talks, the drug-free and safe-driving rules, and the fire marshal/first aider rosters current	PPE issuance log; toolbox talk attendance; incident register; monthly	Safety Officer
Structural works pending landlord consent	Submit a written request to the landlord for each structural item, with a fallback semi-permanent option ready if consent is delayed or refused	Correspondence log and consent status; tracked until resolved	Depot Manager
Recommended solar-powered pump, CCTV and security lighting not yet installed	Install the solar-powered borehole pump, CCTV and dedicated security lighting, building on the solar panels already on the office roof and yard pole	Installation completion and functional test; one-off, then a quarterly maintenance check	Depot Manager
Potential nuisance to close neighbours (Section 255, ASEPAL 2024)	Maintain a nuisance/complaints log, respond promptly to any complaint from a neighbouring business, and keep neighbours informed ahead of unusually dusty or noisy operations	Complaints register; continuous, reviewed monthly	Depot Manager / Safety Officer

Stormwater leaving the compound uncontrolled toward the watercourse noted in section 2.3	Ensure the catchment pit and general yard drainage capture runoff on site rather than allowing it to leave the compound unchecked	Visual check after rainfall, as for the waterlogged section above	Depot Manager
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4.3 Priority Corrective Actions

4.3.1 Expansion and Ventilation of the Drivers/loaders Facility

The rest house and its attached convenience, described in section 2.5.6, is the single item this EMP treats as needing attention without further delay. The recommended fix is straightforward in principle even if it takes some working out in practice: the facility needs to be sized to the number of drivers and loaders actually using it on a typical day, once that number is confirmed (section 3.9.3), and the convenience needs a window large enough, or an extractor fan fitted, to move air through the space properly. Whether this is best done by extending the existing structure, reconfiguring the space already available, or fitting a mechanical extractor to the current small window as an interim measure, is a decision for the proponent and its facilities team to make once the landlord consent position in section 4.9 is settled. What matters for this EMP is that the fix, whichever form it takes, restores the facility to a standard the depot's own workers would actually want to use, since a facility people avoid using is not really solving the hygiene problem it exists to solve.

This item is given priority status because it is a worker welfare matter with a health and dignity dimension, not because it carries the largest environmental footprint of anything in this chapter. It should not wait behind the catchment pit or any of the monitoring items below.

4.3.2 Catchment Pit for the Waterlogged Section

The standing water at the inner part of the compound, shown in Plate 3.4, needs a properly built catchment pit rather than continued reliance on the ground's own, evidently poor, infiltration. Before the pit is sized, a simple percolation test at the proposed location is recommended, since the compound is fully paved and the infiltration capacity of the underlying ground is unknown; this will determine how large the pit needs to be, and whether it can be a simple soakaway or needs to be lined and pumped. The pit should be sited clear of the truck loading and manoeuvring paths described in section 2.5.2, and set back a reasonable distance from the borehole, generally accepted

good practice in this part of Nigeria being a minimum separation in the region of fifteen to thirty metres between a soakaway-type structure and a water supply source, to avoid any risk of cross-contamination. As with the rest house, this work touches the fabric of a rented property and is subject to the landlord consultation process in section 4.9.

4.4 Air Quality and Dust Management

The air quality readings in section 3.4 were reassuring as far as they went, but they were taken without active loading, and dust from bag handling and truck movement is the depot's most obvious air quality concern precisely because it was not captured on the day of the visit. The practical measures recommended are unglamorous but effective: damping down the yard's dusty surfaces during the dry season and especially through the harmattan months described in section 3.2, sweeping up spilled product promptly rather than letting it accumulate and get kicked up by traffic, and issuing dust masks to workers directly handling bags at the loading point. The warehouse's existing wall-mounted extractor fans (section 2.5.3) should be checked to confirm they are still working and are adequate for the space; if the repeat monitoring recommended below shows a real problem at the warehouse door, additional local extraction at the specific point where bags are opened and stacked would be the next step, rather than a general assumption that more fans are needed everywhere.

The repeat air quality survey called for in Table 3.4 should be carried out during active loading or offloading, at two points in particular: the warehouse door, where dust from bag handling is most concentrated, and the compound boundary nearest the businesses identified in Table 2.2 as being directly across the road, the restaurant and the water-vending business in particular, since these are the neighbours most likely to notice and be affected by dust drifting off the depot's own frontage.

4.5 Noise Management

The three noise readings in section 3.5, ranging from 57.5 dB(A) LAeq at the inner end of the compound to 68.9 dB(A) at the gated entrance, show a clear gradient across the site and are treated in this EMP as a genuine finding rather than a one-off anomaly to be explained away. The entrance and mid-yard points sit above the lower bound of the indicative daytime range, while the inner end sits below it. Three things are recommended. First, routine good practice: keeping trucks and any yard equipment properly maintained, since a poorly tuned engine or a worn reversing alarm adds

more noise than a well-kept one, and discouraging unnecessary horn use and prolonged idling within the yard. Second, a full-shift noise dosimetry study, covering a complete working shift with the depot actively loading and offloading, to establish whether worker exposure over a full day approaches the region of 85 dB(A) generally used as an occupational action level; the three spot readings available cannot answer that question on their own. The study should sample the same three locations used in section 3.5 (entrance, mid-yard, inner end), so that the noise gradient observed during the baseline visit can be confirmed and used to target any hearing-protection measures at the workers most exposed. Third, a repeat boundary noise check on a quarterly basis, at the points nearest the depot's closer neighbours, to track whether noise levels are stable, improving, or getting worse as operations continue. This check should include the gated entrance point, which recorded the highest of the three baseline readings and is also the point closest to the live expressway.

If the full-shift study confirms sustained exposure at or above the occupational action level, hearing protection for yard-based drivers and loaders should be added to the PPE already issued, and this becomes a standing item in the monitoring programme in section 4.10 rather than a one-time fix.

4.6 Water Supply, Sanitation and Effluent Management

The borehole supplying the depot (section 2.5.4) has now been sampled and tested against NSDWQ 2015 parameters, with the result reported in section 3.6 and Table 3.5. Electrical conductivity (103 $\mu\text{S}/\text{cm}$) and total dissolved solids (52 ppm) both passed, well within the NSDWQ ceilings. pH, however, returned 5.08 against a limit of 6.5 to 8.5, marking the water as acidic and liable to affect taste and corrode metal pipework and fittings over time. The recommended corrective action is therefore installation of a pH-neutralising filter or dosing unit on the borehole supply, followed by a confirmatory retest once installed to verify the correction has worked. E. coli, iron and nitrate were not included in this round of testing; if a fuller panel is still wanted, those parameters should be added at the next sampling round, particularly given the depot's location among other businesses with their own septic systems close by.

On sanitation, the septic tank and soakaway pit (section 2.5.5) should have their last desludging date confirmed and a desludging schedule put in place going forward, using a licensed contractor. The depot's current headcount should also be confirmed and checked against the fifty-person

threshold in Section 216 of the Anambra State Environmental Management, Protection and Administration Law, 2024; if the workforce and regular visitors together meet or exceed that number, a formal wastewater clearance, or connection to the catchment sewage system referred to in that section, should be pursued with the Ministry rather than left on the existing septic arrangement by default.

4.7 Solid Waste Management

The covered waste bin observed at the depot (section 2.5.7) is adequate as it stands; what needs confirming is who empties it. The collector should be checked to confirm registration with the Anambra State Waste Management Authority, and waste should continue to go only to a designated disposal site, in line with Sections 135 to 137 of the Anambra State Environmental Management, Protection and Administration Law, 2024, which between them require a covered bin, prohibit open burning, and require waste to be taken only to an approved site. Should the depot ever generate oil, grease or similar liquid waste, from vehicle servicing carried out on site, for instance, this should be stored separately and disposed of through a properly licensed route rather than into the yard drains, in line with Section 141 of the same law.

4.8 Occupational Health and Safety Management

The depot's existing occupational health and safety programme, summarised in Table 3.3, is a genuine strength and the right foundation to build on rather than replace. The recommendations here are extensions rather than a fresh start: issuing dust masks and, if the noise study in section 4.5 confirms the need, hearing protection, to workers whose duties put them regularly in the yard; keeping the fire marshal roster and first aider list current as staff change; continuing the monthly toolbox talk habit that a site with this level of documented policy almost certainly already has, and using it to cover the specific findings of this report as they are addressed; and continuing to use the existing "Safety in Motion" digital reporting channel to log near misses and hazards related to dust, noise, and the facility issues raised in this chapter, so that the group-level system already in place captures depot-specific data rather than only broad categories.

Any of the physical works recommended above, in particular installing the solar CCTV, security lighting and pump, and any structural work on the rest house or the catchment pit, should go through the depot's own work-permit system already referenced in its site rules (Table 3.3) before

work begins, since these involve electrical connection, excavation, or building work that the existing rule was written to cover.

4.9 Structural Works and Tenure-Related Considerations

Four items in this chapter, the rest house expansion, the catchment pit, and the solar-powered pump, CCTV and lighting installations, involve physical alteration to a property the proponent rents rather than owns (section 2.2). The recommended process is to put a written request to the landlord for each item, setting out what is proposed, why, and how it will be carried out, rather than proceeding on the assumption that a tenant may make any alteration it judges necessary. Where cost-sharing or a rent adjustment might reasonably form part of that conversation, particularly for a permanent structure like a catchment pit that adds value to the property itself, that is a commercial discussion between the proponent and the landlord that sits outside the scope of this EMP, but this report notes it as worth raising.

Where landlord consent for a particular item is delayed or refused, a fallback should be ready rather than leaving the underlying problem unaddressed. For the rest house and convenience, a semi-permanent or modular unit, such as a prefabricated cabin or an upgraded portable facility, could serve as an interim solution that does not alter the existing structure. For the catchment pit, a lined, above-ground catchment tank or bunded holding area could serve a similar function to a dug pit without excavation, at some cost to capacity and at correspondingly increased maintenance frequency. These fallback options are not a substitute for pursuing the primary recommendation but are recorded here so that landlord consent does not become a reason for the underlying issue to simply sit unresolved.

4.10 Monitoring Programme

Table 4.2 sets out the specific monitoring activities that follow from the mitigation measures above, with the method, location, frequency and responsible party for each. This table is what turns the mitigation matrix in Table 4.1 into a routine the depot's own staff can actually run, rather than a one-time exercise.

Table 4.2: Monitoring Programme

Parameter	Method / Location	Frequency	Responsible Party
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Ambient air quality (PM10, PM2.5) during active loading	Portable air quality monitor or accredited laboratory, at the warehouse door and at the compound boundary nearest Table 2.2 neighbours	Quarterly, and at the onset of the harmattan season	Safety Officer
Ambient noise	Sound level meter, spot readings at three fixed points: the gated entrance, the middle of the truck yard, and the extreme inner end of the compound; one full-shift dosimetry study at the same three points	Quarterly spot checks; one-off full-shift study	Safety Officer
Borehole water quality	Accredited laboratory sample from the borehole tap, against WHO/NSDWQ 2015 parameters	Initial test, then annually	Depot Manager
Waterlogged section / catchment pit function	Visual inspection of the low corner of the compound	After every significant rainfall, and a monthly general sweep	Depot Manager
Septic tank / soakaway condition	Desludging record review; visual check for surface signs of overflow	As indicated by inspection, at minimum annually	Depot Manager
Headcount against the Section 216 threshold	HR register review	Quarterly	Depot Manager / HR
Waste collection	Review of collection receipts/manifest from the licensed collector	Monthly	Depot Manager
Fire extinguisher condition	Visual and tag inspection at all extinguisher points	Monthly	Safety Officer

PPE issuance and toolbox talks	Issuance log and attendance record review	Monthly	Safety Officer
Complaints / nuisance log	Register of any complaint received from a neighbouring business or member of the public	Continuous, reviewed monthly	Depot Manager
Storage permit validity (Section 289)	Confirm permit on file and current	Annually	Depot Manager / Compliance

4.11 Implementation Schedule and Indicative Cost Range

Table 4.3 gives an indicative timeframe and a broad cost band for each action, rather than a firm figure, since no procurement or contractor quotation was obtained as part of this study. Cost bands are described qualitatively: Negligible (staff time only), Low, Moderate, or Significant, and should be treated as a planning guide rather than a budget.

Table 4.3: Implementation Schedule and Indicative Cost Range

Action	Priority	Indicative Timeframe	Indicative Cost Band	Dependency
Written request for landlord consent (all structural items)	Immediate	Within 2 weeks	Negligible	None
Borehole water quality test	Immediate	Within 1 month	Low	None
Percolation test at proposed catchment pit site	Immediate	Within 1 month	Low	None
Headcount confirmation against Section 216 threshold	Immediate	Within 2 weeks	Negligible	HR cooperation
Storage permit confirmation/application (Section 289)	Immediate	Within 1 month	Negligible to Low	Liaison with the Ministry
Full-shift noise dosimetry study	High	Within 1 quarter	Low to Moderate	May require hired equipment or a specialist

Catchment pit construction	High	Within 1 quarter of landlord consent	Moderate	Landlord consent; percolation test result
Rest house and convenience expansion or reconfiguration	High	Within 1 to 2 quarters of landlord consent	Moderate to Significant	Landlord consent; confirmed headcount
Repeat air quality survey during active loading	Ongoing	From the next full quarter	Low	None
Solar-powered borehole pump	Medium	Within 2 quarters	Moderate	None
Solar-powered CCTV and security lighting	Medium	Within 2 quarters	Moderate	None
Septic tank / soakaway desludging	Medium	As indicated by inspection	Low to Moderate	Confirmed date of last desludging
PPE extension (dust masks, hearing protection)	Medium	Within 1 quarter, pending monitoring results	Low	Air quality and noise monitoring results

4.12 Roles and Responsibilities

Table 4.4 summarises who is responsible for what under this chapter. A fuller institutional account, including how the depot engages its neighbours and the Ministry, and how a complaint or grievance is actually handled from start to finish, is left to Chapter Five, which deals with implementation arrangements in the round rather than mitigation measure by mitigation measure.

Table 4.4: Roles and Responsibilities

Role	Responsibility Under This Chapter
Depot Manager	Overall implementation of this chapter, landlord liaison, budget decisions on structural works, and headcount and permit tracking

Safety Officer	Day-to-day monitoring, toolbox talks, PPE issuance, upkeep of the HSE noticeboard, and the incident and complaints registers
Fire Marshals (as already listed in Table 3.3)	Continue existing fire safety duties, and support dust and noise observation reporting as an extension of their existing role
First Aiders (as already listed in Table 3.3)	Continue existing first aid duties, unchanged by this chapter
Proponent, HBM Nigeria Plc / Huaxin group EHS function	Approve budget for the structural works recommended in this chapter, and ensure the group's "Safety in Motion" system captures depot-specific data
Landlord	Consider and respond to the depot's written requests for consent to the structural works described in section 4.9
Anambra State Ministry of Environment	Review this EMP, receive monitoring reports once the plan is operating, and inspect the facility as it considers appropriate
Stellovate Limited (EMP consultant)	Support the initial round of confirmatory testing, in particular the borehole water test, the percolation test and the noise dosimetry study, and review implementation at agreed intervals

CHAPTER FIVE

IMPLEMENTATION ARRANGEMENTS

5.1 Introduction

This part closes the Environmental Management Plan for the HBM Nigeria Plc Depot, Onitsha-Enugu Expressway, Ogidi, Anambra State. Chapter Four set out what needs to be done and how progress will be measured; this chapter sets out who carries that forward on an ongoing basis, how the depot will engage the neighbours and institutions identified in Chapter Two, how a complaint from any of them is actually handled, what happens in an emergency, and how this EMP itself gets kept current rather than filed away and forgotten. Read together with Chapters One to Four, this completes the report as originally scoped in section 1.3.

Two things run through this chapter that are worth stating plainly at the outset. First, the depot already has a working occupational health and safety structure, described in Table 3.3, with named fire marshals, trained first aiders, and a standing hospital arrangement; this chapter builds institutional arrangements around that existing structure rather than inventing a parallel one. Second, formal consultation with the depot's immediate business neighbours, flagged as outstanding in section 3.9.6, has not yet taken place as at the writing of this report; section 5.3 below sets out the plan for that consultation rather than a completed record, and the outcome should be appended to this EMP once it has been carried out.

5.2 Institutional Roles and Responsibilities

Table 4.4 gave a short summary of who is responsible for the specific mitigation and monitoring actions in Chapter Four. Table 5.1 below sets the same parties out in fuller institutional terms, covering how information and decisions are expected to flow between them on an ongoing basis, not only for the specific items already identified but for the depot's environmental and social performance generally.

Table 5.1: Institutional Roles, Responsibilities and Reporting Lines

Party	Role	Reports To / Receives Reports From
Depot Manager	Day-to-day responsibility for implementing this EMP, landlord liaison, budget decisions	Reports to the proponent's head office / Huaxin group EHS

	on corrective works, and the first point of institutional accountability for the depot's environmental and social performance	function; receives monitoring updates from the Safety Officer
Safety Officer	Runs the monitoring programme in Table 4.2, keeps the HSE noticeboard current, logs complaints and incidents, and issues PPE	Reports to the Depot Manager; receives reports from fire marshals and first aiders on safety-related observations
Fire Marshals (ten named staff, Table 3.3)	Existing fire safety duties, plus informal observation and reporting of dust, noise or drainage issues noticed in the course of their normal duties	Report to the Safety Officer
First Aiders (three trained staff, Table 3.3)	Existing first aid duties, and the first point of contact for any injury or health complaint on site pending onward referral	Report to the Safety Officer; refer to St. Charles Borromeo Specialist Hospital, Onitsha where needed
Proponent, HBM Nigeria Plc / Huaxin group EHS function	Approves budget for the corrective works in Chapter Four, decides the landlord consent approach in section 4.9, and ensures the group's "Safety in Motion" system reflects depot-specific findings	Receives reports from the Depot Manager; reports upward within its own corporate structure as it sees fit
Landlord	Considers and responds to the depot's requests for consent to the structural works described in section 4.9	Receives correspondence from the Depot Manager; not otherwise part of the depot's routine reporting line
Anambra State Ministry of Environment	Reviews and registers this EMP under Part 8 of the Anambra State Environmental Management, Protection and Administration Law, 2024, receives periodic monitoring reports once submission begins (section 5.6), and may inspect the facility	Receives reports from the proponent; the depot receives any regulatory correspondence in return through the Depot Manager
Stellovate Limited (EMP consultant)	Supported preparation of this EMP, and supported the completed borehole water test; remaining outstanding items are the percolation test and the noise dosimetry study, and periodic review of implementation	Reports findings to the proponent; not part of the depot's day-to-day management structure

5.3 Stakeholder Identification and Consultation Plan

Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024 places a duty on the relevant authority to notify and consult the public before certain environmental decisions are taken, and good practice in any case supports the depot informing its closest neighbours of what this EMP contains, particularly given the dust and noise findings in Chapter Three. Table 5.2 sets out who has been identified for this consultation, drawing on Table 2.2, and how it is proposed to be carried out. As stated in section 5.1, this consultation had not been carried out at the time of writing this chapter, and the table below is a plan to be executed rather than a completed record.

Table 5.2: Stakeholder Identification and Consultation Plan

Stakeholder	Basis for Inclusion	Proposed Method	Proposed Timing
Macdon Industries and Origin Steel & Design Limited (adjoining plots)	Immediate adjoining neighbours most exposed to any dust or noise from the depot's own boundary	Written notification letter, followed by a short in-person visit to the site manager or equivalent	Within 1 month of this EMP's submission
Nwanyi Nando Restaurant, the "Building Materials" outlet, and Blessed Ucheson waterline (directly across the expressway)	Food and water-handling businesses identified in Table 2.2 as a reasonable receptor for dust nuisance	Written notification letter and an invitation to raise concerns directly with the Safety Officer	Within 1 month of this EMP's submission
Cedar View International School	Nearest identified school and the most sensitive receptor for noise and dust among those mapped in Table 2.2	Formal letter to the school administration, offering a meeting if the school wishes to discuss the depot's operations or this EMP	Within 1 month of this EMP's submission
UBA, Access Bank, Ecobank and other branches nearby	Commercial neighbours within the immediate corridor	Written notification letter	Within 1 month of this EMP's submission
Churches identified in Table 2.2 (St. Mathew's Anglican, St. John's Anglican Ogidi, St. Thomas)	Places of worship potentially sensitive to noise, particularly during service times	Written notification letter to the parish or church office	Within 1 to 2 months of this EMP's submission

Anglican, Saint Stephen Catholic, and others in the vicinity)			
General public / passers-by along the expressway frontage	Section 315 general public notification duty	A notice displayed at the depot's gate summarising the EMP and how to raise a concern	Displayed from the point this EMP is registered with the Ministry

Each round of consultation should be recorded, whether or not the neighbour concerned raises a substantive issue: the date, who was contacted, how, and what if anything they said. This record, once the consultation described above has actually taken place, should be appended to this EMP as a dedicated consultation annex, both to close out the open item from section 3.9.6 and to give the Ministry a documented basis for confirming that Section 315 has been complied with.

5.4 Grievance Redress Mechanism

Anyone affected by the depot's operation, a neighbouring business, a member of the public, or a member of the depot's own workforce, should have a straightforward way to raise a concern and see it followed up. Table 5.3 sets out the steps this EMP recommends, built around the complaints/nuisance log already listed as a monitoring item in Table 4.2 rather than as a separate system.

Table 5.3: Grievance Redress Mechanism

Step	Action	Timeframe	Responsible Party
1. Receipt	Complaint received in person at the gate, by phone to the numbers displayed on the HSE noticeboard, or in writing, and logged in the complaints register	Immediately on receipt	Safety Officer (or gate security in the first instance, who passes it to the Safety Officer)
2. Acknowledgement	Complainant is told the complaint has been received and given a rough idea of when to expect a response	Within 2 working days	Safety Officer

3. Investigation	The Safety Officer, with the Depot Manager where needed, looks into the complaint, which may include checking the relevant part of the monitoring record in Table 4.2 (for example, the dust or noise readings nearest the date and location of the complaint)	Within 10 working days	Safety Officer / Depot Manager
4. Response and Resolution	Complainant is told what was found and what, if anything, the depot will do about it; agreed action is added to the mitigation plan in Chapter Four if it points to something not already covered	Within 15 working days of receipt	Depot Manager
5. Escalation	If the complainant is not satisfied with the response, or the complaint concerns a potential breach of the Anambra State Environmental Management, Protection and Administration Law, 2024, the matter is referred to the Anambra State Ministry of Environment	As requested by the complainant, or where internal resolution fails	Depot Manager, in communication with the Ministry
6. Closure	Once resolved, the outcome is recorded in the complaints register and reviewed as part of the monthly review already set out in Table 4.2	At resolution	Safety Officer

This mechanism is deliberately built to be simple enough that a neighbour or a worker can actually use it without needing to know the details of this report. The complaints register itself becomes part of the evidence base for how well the mitigation measures in Chapter Four are working; a pattern of repeated complaints about the same issue is itself a signal that the relevant mitigation measure needs to be revisited rather than simply logged and closed each time.

5.5 Emergency Response Procedures

The depot's existing Health, Safety and Environmental noticeboard, described in section 3.9.7 and shown in Plate 3.1, already sets out clear emergency procedures for medical, fire and security incidents, with direct phone numbers for the Depot Manager and Safety Officer and a standing referral arrangement with St. Charles Borromeo Specialist Hospital, Onitsha. Table 5.4 restates this in one place for completeness and adds environmental-incident response, which was not separately covered on the existing noticeboard.

Table 5.4: Emergency Response Summary

Emergency Type	Immediate Action	Key Contact	Follow-up
Fire	Shout "Fire! Fire! Fire!", trigger the nearest alarm point, evacuate to the marked muster point, do not stop to collect personal items	Depot Manager (existing noticeboard number); nearest fire marshal from the list of ten in Table 3.3	Incident logged; fire extinguisher recharge/replacement arranged; toolbox talk to review what happened
Medical emergency	Shout for help, keep the victim where they are unless in further danger, apply first aid if trained, do not leave the victim alone	Nearest of the three first aiders (one named on the noticeboard: Emmanuel Atanmoh); Depot Manager; St. Charles Borromeo Specialist Hospital, Onitsha for onward referral	Incident logged; reviewed for any link to the noise, dust or manual handling issues discussed in Chapters Three and Four
Security incident	Remain calm, call the Depot Manager on the number displayed at the gate, follow the instructions of the manned security post	Depot Manager; on-site security personnel	Incident logged and reported to the proponent's head office as appropriate
Drainage overflow / flooding at the waterlogged section	Keep workers and vehicles clear of the affected area until it drains or is pumped down; do not attempt to drive through standing water in the yard	Depot Manager	Logged as part of the catchment pit monitoring in Table 4.2; treated as evidence the pit needs attention if it recurs after the pit is built
Spill of oil, grease or similar liquid waste	Contain the spill with available absorbent material, keep it away from yard drains, do not hose it into the compound drainage	Safety Officer	Disposed of through a licensed route as described in section 4.7; logged as an incident

Nothing in Table 5.4 is intended to replace the existing noticeboard procedures, which should remain displayed and current; it is intended to sit alongside them and to make sure the environmental incidents this EMP is specifically concerned with, drainage overflow and liquid

waste spills in particular, are covered with the same clarity as the fire and medical procedures the depot already has well in hand.

5.6 Reporting and Review Arrangements

This EMP is intended to be registered with the Anambra State Ministry of Environment in line with Part 8 of the Anambra State Environmental Management, Protection and Administration Law, 2024, and entered in the Ministry's Public Registry as that Part requires. Once registered, the depot should submit a short periodic report to the Ministry summarising the monitoring results from Table 4.2, any complaints received and how they were resolved under the mechanism in section 5.4, and progress against the implementation schedule in Table 4.3. A twice-yearly report is recommended in the first instance, moving to annual reporting once the priority corrective actions in section 4.3 are complete and the monitoring programme has settled into routine.

This EMP itself should not be treated as a document written once and left unchanged. It should be reviewed and, if necessary, revised whenever any of the following happens: a significant change to the depot's operation (a material increase in truck volume, a change in the type of material handled, or a change of operator); a monitoring result that breaches, or comes close to breaching, one of the standards in Table 1.3; a pattern of repeated complaints on the same issue through the grievance mechanism in section 5.4; or, in the absence of any of the above, at an outer limit of every two years. Responsibility for triggering this review sits with the Depot Manager, in consultation with the proponent's EHS function and, where the review is substantial, with Stellovate Limited or another qualified consultant.

5.7 Conclusion

Taken together, Chapters One to Five give the HBM Nigeria Plc Depot at Ogidi a working Environmental Management Plan: the legal basis for it and what it is meant to achieve (Chapter One), a description of the depot and its rented site (Chapter Two), a plain account of baseline conditions and what still needs confirming (Chapter Three), a mitigation and monitoring plan for every issue that account raised (Chapter Four), and the institutional, consultation, grievance and emergency arrangements needed to carry that plan out (this chapter). None of this depends on treating the depot as a green-field project it is not; the whole report has been built around what a facility that is already operating actually needs, which is correction where correction is due,

monitoring where uncertainty remains, and a documented routine that keeps both on track going forward.

Two things remain outstanding beyond the writing of this report, and both are the proponent's to act on rather than matters this document can settle on paper. First, the specific corrective and confirmatory actions listed in Table 4.3, most pressingly the landlord consent request, the borehole pH correction, and the percolation test, all timetabled for immediate or near-term action. The borehole water test itself has now been completed, with pH failing at 5.08 and correction recommended. Second, the stakeholder consultation set out in section 5.3, which should be carried out and its record appended to this EMP before the plan is treated as complete for submission. Once both are done, this report is intended to stand as the depot's registered Environmental Management Plan under the Anambra State Environmental Management, Protection and Administration Law, 2024, subject to whatever further comment the Ministry itself may have on review.

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APPENDICES

Appendix A: Photographic Record

This appendix gathers additional site photographs taken during the May 2026 visit that are not already reproduced as numbered plates in Chapters Two and Three. They are included here for completeness and to give the Ministry, or anyone else reviewing this report, a fuller sense of the depot and its immediate surroundings than the main text alone provides.



Plate A.1: Traffic Conditions on the Onitsha-Enugu Expressway Near the Depot Frontage



Plate A.2: Yard Corner Showing Painted Parking Blocks

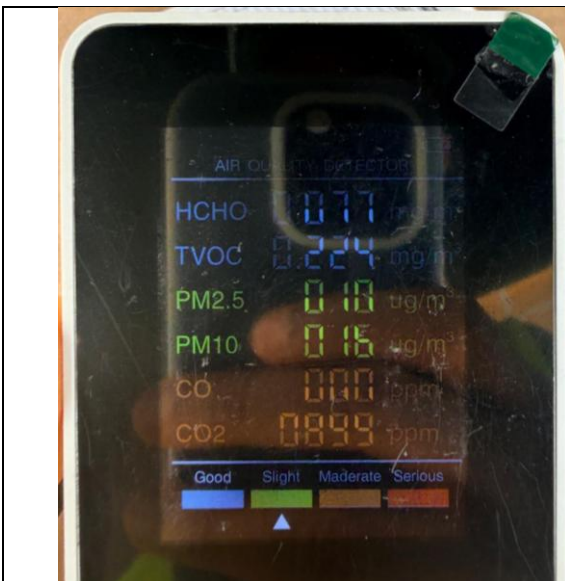


Plate A.3: Portable Air Quality Monitor Reading Taken on Site



Plate A.4: Sound Level Meter Reading Taken on Site

Appendix B: Baseline Monitoring Data Log Sheets

Tables B.1 and B.2 present the individual instrument readings behind the summary tables in Chapter Three (Table 3.1 and Table 3.2), in the form of a log sheet rather than a results summary. The sequence in which the three air quality readings were taken is preserved as Point 1, Point 2 and Point 3, consistent with Chapter Three.

Table B.1: Air Quality Monitoring Log

Date	Instrument	HCHO (mg/m ³)	TVOC (mg/m ³)	PM2.5 (µg/m ³)	PM10 (µg/m ³)	CO2 (ppm)
May 2026	Handheld air quality detector, Point 1, depot yard	0.077	0.224	10	16	899
May 2026	Handheld air quality detector, Point 2, depot yard	0.000	0.000	13	18	838
May 2026	Handheld air quality detector, Point 3, depot yard	0.016	0.047	17	25	569

Table B.2: Noise Monitoring Log

Monitoring Point	LAeq dB(A)	Lmax dB	LCpeak dB	TWA dB	FME _{env} /NESREA (Commercial/Light Industrial)	Observation
Point 1. Gated entrance	68.9	70.4	74.2	76.3	60 to 70 dB(A)	HIGH, above range
Point 2. Middle of truck yard	64.2	67.7	71.5	74.1	60 to 70 dB(A)	MODERATE, above range
Point 3. Extreme inner end	57.5	63.1	65.8	68.2	60 to 70 dB(A)	NORMAL to MODERATE

Appendix C: Stakeholder Notification Letter

The text below is a template letter for the Depot Manager to adapt and send to each stakeholder listed in Table 5.2. It should be printed on the proponent's letterhead, dated, and signed, with a copy retained on file as part of the consultation record referred to in section 5.3.

To:

Address:

Date:

Notification of Environmental Management Plan for HBM Nigeria Plc Depot, Ogidi

Dear Sir/Madam,

We write to inform you that HBM Nigeria Plc has prepared an Environmental Management Plan (EMP) for its depot located at [address], in line with the Anambra State Environmental Management, Protection and Administration Law, 2024. As a ~~neighbouring~~ business/institution, we would like to inform you of the depot's operations and the measures we have put or are putting in place to manage dust, noise and other aspects of our operation that could affect you.

If you have any comment, question or concern about the depot's operation, you are welcome to raise it with our Safety Officer at [phone number], or by visiting the depot at the address above. We would also welcome the opportunity to meet with you directly if you would find that useful.

Yours faithfully,

Depot Manager, HBM Nigeria Plc Depot, Ogidi

Figure C1: Stakeholder Notification Letter

Appendix D: Consultation Attendance Register

Table D.1 is the template to be used for recording each stakeholder contact made under the consultation plan in Table 5.2. A separate row should be completed for each stakeholder visited, called, or written to, whether or not they raised a substantive comment, and the completed register should be appended to this EMP once the consultation round described in section 5.3 is finished.

Table D.1: Consultation Attendance Register

Date	Stakeholder Contacted	Method (Letter / Visit / Phone)	Contacted By	Comment Raised (if any) and Depot's Response

Appendix E: Grievance / Complaint Report Form

Table E.1 is the form to be completed for every complaint received under the grievance mechanism set out in section 5.4, whether the complainant is a neighbouring business, a member of the public, or a depot worker. One completed form per complaint should be kept in the complaints register referred to in Table 4.2.

Table E.1: Grievance / Complaint Report Form (Template)

Field	Detail
Date and time complaint received	
Complainant's name and contact (or "anonymous" if preferred)	
Nature of complaint (dust, noise, drainage, other)	
Received by	
Date acknowledged to complainant	
Investigation findings	
Action taken / response given to complainant	
Date resolved	
Escalated to the Ministry? (Yes/No, and if yes, date and outcome)	

Appendix F: Summary of Key Legal Provisions Referenced in This Report

Table F.1 summarises, in this report's own words rather than by quoting the statute at length, the specific provisions of the Anambra State Environmental Management, Protection and Administration Law, 2024 relied on in Chapter One and applied through Chapters Three and Four. It is offered as a quick-reference guide for the depot's own staff and is not a substitute for reading the Law itself, a copy of which the Depot Manager is encouraged to keep on file alongside this EMP.

Table F.1: Summary of Key Legal Provisions

Section(s)	Subject	Summary
Sections 226 to 246 (Part 8)	Environmental, Social, Health and Safety Management Plan (ESHSM)	Sets out when an ESHSM-type document is required, its minimum content, and the requirement to register it with the Ministry's Department of Ecology and enter it in the Public Registry
Sections 79 to 81	Setbacks and landscaping	Requires a landscaped setback around a tenement, properly maintained and either greened or paved, with drainage kept clear
Sections 135 to 137	Waste handling	Requires a covered dustbin and clear drains at the premises, prohibits open burning of waste, and requires waste to be taken only to a designated disposal site
Section 141	Industrial/commercial liquid waste	Requires oil, grease and similar liquid waste to be properly stored and disposed of rather than discharged untreated into drains
Section 216	Wastewater clearance	Requires a formal wastewater clearance, or connection to the catchment sewage system, for a facility whose population reaches fifty persons or more
Section 255	Statutory nuisances	Lists dust, fumes, accumulated matter and noise from trade or business premises as statutory nuisances that can be acted against
Section 282	Noise from loudspeakers/public address systems	Restricts the use of loudspeakers and similar equipment in a manner that causes nuisance
Section 289	Storage of cement and similar materials	Requires a permit for the storage of cement and comparable materials within a commercial area
Section 315	Public notification and consultation	Places a duty on the relevant authority to notify and consult the public before certain environmental decisions are taken

This report has also drawn on the Environmental Impact Assessment Act, Cap E12, LFN 2004, and its EIA Procedures and Charges Regulations, 2021, the NESREA Act, 2007, and other national instruments listed in Table 1.2, none of which are reproduced here beyond what is already summarised in Chapter One.