
ENVIRONMENTAL MANAGEMENT PLAN (EMP) REPORT

FOR THE PROPOSED CONSTRUCTION OF A
COMMERCIAL RESIDENTIAL BUILDING
NO. 6, SMOOTH DIAMOND CRESCENT, PEACE ESTATE, OTOKO, ISU ANIOCHA,
AWKA NORTH LGA, ANAMBRA STATE

PROPONENT:

MR. CHIMASI PAUL AMAECHI OBASI



PREPARED BY:

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PREPARED FOR SUBMISSION TO:

ANAMBRA STATE MINISTRY OF ENVIRONMENT

MAY 2026

THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL
REGULATIONS.

APPROVAL

This Environmental Management Plan has been prepared, reviewed and approved for submission by the following authorized people. All signatories confirm that, to the best of their knowledge and professional judgement, the content of this report is accurate, complete and compliant with the requirements of the Anambra State Environmental Management, Protection and Administration Law, 2024, and the Federal EIA Procedures and Charges Regulations, 2021.

1. Consultant Team of Stellovate Limited

 Engr. George Okoye Lead Consultant / EMP Author Stellovate Limited	Date of Approval: May 2026 Company Signature/Stamp:
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2. Proponent Declaration

I, Mr. Chimasi Paul Amaechi Obasi, the proponent of the above-referenced project, confirm the following:

- a) The information provided in this Environmental Management Plan is accurate and complete to the best of my knowledge.
- b) I commit to implementing all mitigation measures, monitoring requirements and institutional responsibilities set out in this EMP throughout the pre-construction, construction and operational phases of the project.
- c) I commit to submitting this EMP to the Anambra State Ministry of Environment and to registering the project in the Public Registry of the EIA Committee before any construction work commences on site.
- d) I commit to obtaining the Wastewater Clearance under Section 216(1) of the Anambra State Environmental Management, Protection and Administration Law, 2024, before the first tenant occupies the building.
- e) I commit to making this EMP available for inspection to any regulatory officer from Awka North LGA or the Anambra State Ministry of Environment at any time during the project.

Mr. Chimasi Paul Amaechi Obasi Proponent Proponent's Signature	Date: May 2026
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3. Regulatory Acknowledgement

This section is to be completed by the Anambra State Ministry of Environment on receipt of this document.

Dr. Ijeoma Onyekwelu Head of Ecology Department Anambra State Ministry of Environment	Date Received: Ministry Reference Number: Official Stamp:
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DISCLAIMER

This Environmental Management Plan has been prepared by Stellovate Limited in good faith and to the best professional standards applicable at the time of preparation. It is based on information provided by the proponent, field measurements conducted in May 2026, laboratory analysis of collected samples and published secondary data sources. Stellovate Limited accepts no liability for any decision made by any party on the basis of this document beyond its intended purpose of regulatory submission. This document may not be reproduced, distributed or used for any purpose other than the regulatory submission for which it has been prepared without the written consent of Stellovate Limited and the proponent.

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LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
ANSEWCCA	Anambra State Erosion, Watershed and Climate Change Agency
ASWAMA	Anambra State Waste Management Authority
CCTV	Closed Circuit Television
CO	Carbon Monoxide
DVR	Digital Video Recorder
EEDC	Enugu Electricity Distribution Company
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESS2	Environmental and Social Standard 2 (World Bank), Labor and Working Conditions
ESS10	Environmental and Social Standard 10 (World Bank), Stakeholder Engagement and Information Disclosure
H ₂ S	Hydrogen Sulphide
LED	Light Emitting Diode
LGA	Local Government Area
ND	Not Detected, at instrument detection limit
NESREA	National Environmental Standards and Regulations Enforcement Agency
NO ₂	Nitrogen Dioxide
NO ₃	Nitrate
NSDWQ	Nigerian Standard for Drinking Water Quality
NTU	Nephelometric Turbidity Unit
OHS	Occupational Health and Safety
PAH	Polycyclic Aromatic Hydrocarbons
PM ₁₀	Particulate matter with a diameter of 10 microns or less
PM _{2.5}	Particulate matter with a diameter of 2.5 microns or less
PPE	Personal Protective Equipment
SO ₂	Sulphur Dioxide
TDS	Total Dissolved Solids
TOR	Terms of Reference
TPH	Total Petroleum Hydrocarbons
TPM	Total Particulate Matter
VOC	Volatile Organic Compound
WHO	World Health Organization

EXECUTIVE SUMMARY

This Environmental Management Plan has been prepared for the proposed construction of a three-floor commercial residential building at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North Local Government Area, Anambra State. The proponent is Mr. Chimasi Paul Amaechi Obasi. The building will be erected on a 522 square metre plot with a building footprint of 279 square metres, leaving 168 square metres of free compound space. It will contain six self-contained flats, two on each of the ground, first and second floors. The compound will include six car parking spaces, a borehole with solar-powered pump and overhead storage tank, a soakaway pit and septic tank, a stormwater catchment pit, a covered waste bin container at the compound frontage, solar-powered CCTV cameras, solar-powered LED security lights and a fully fenced perimeter with gate.

The site setting distinguishes this project from a generic urban construction site in two important ways. First, the compound is already fully enclosed by a perimeter fence and gate on all sides including the front, which immediately reduces dust dispersal, improves site security and confines construction activity within a defined, manageable boundary. Second, the immediate neighbourhood is mixed: while there are empty plots to the north and east, a completed bungalow shares the south boundary fence directly with the project site, a one-storey building sits across the road to the south-west, and the Smooth Diamond Crescent access road runs along the west boundary. These occupied neighbours are genuine sensitive receptors that must be actively managed throughout construction, particularly for dust, noise during working hours and surface drainage.

All construction will be carried out primarily by manual hand tools. A generator on site is used exclusively for pumping water from the borehole into storage drums for construction use. It is switched off immediately after pumping is complete and does not power any construction activity. This approach avoids mechanised noise and diesel emissions from construction equipment entirely.

A site inspection conducted in May 2026 confirmed baseline conditions at and around the project site. Air quality is clean and less dusty due to recent rainfall, with all measured parameters well within NESREA national limits. The ambient noise environment is near-silent except for worker conversation and occasional manual tool sounds. Groundwater from the on-site borehole is of good

quality and meets WHO and NSDWQ drinking water standards across all parameters. Soil is clean and uncontaminated, with all measured values well within NESREA reference limits.

The primary environmental and social concerns for this project are: dust from cement mixing and surface disturbance affecting the bungalow occupants at the south boundary; noise from manual construction activity and the generator during pumping hours; surface water drainage from the compact 168 square metre free compound space during heavy rainy season storms; solid waste management during both construction and the six-flat operational phase; occupational health and safety of workers during elevated block laying and roofing on the second-floor roof; protection of the on-site borehole from construction contamination; and the management of the waterlogged access road during material deliveries.

A community consultation meeting was held at the project site in May 2026. Participants included the bungalow owner at the south boundary, residents of the one-storey building across the road to the south-west and other identified community members in the Peace Estate area. The consultation was conducted in Igbo and English. All participants supported the project. Their concerns, principally on dust control, drainage toward the south boundary, noise management and the waterlogged access road, are addressed directly in Chapter 4 of this report.

Table x: Summary of Community Consultation outcome

Date of engagement	May 5, 2026
Venue	Project site, No. 6 Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA
Participants	5 people, met individually at different times
Groups represented	South boundary bungalow occupants; occupants of the one-storey building across the road; other Peace Estate residents and stakeholders
Languages used	Igbo and English
Main concerns raised	Construction dust and noise, drainage toward the south boundary, road damage from delivery vehicles, waste blowing over the fence, and long-term management of the compound once occupied
Outcome	All participants confirmed support for the project and raised no objection, subject to the proponent's commitments on dust, noise, drainage, road condition and operational compound management

This EMP is structured in five chapters covering introduction and regulatory framework, project description and site setting, baseline conditions, the impact mitigation and monitoring plan, and implementation arrangements. The Conclusion and Appendices follow Chapter 5. It is the

conclusion of this report that the project, built and managed in accordance with the measures set out here, presents no significant or lasting danger to the environment or to the surrounding community.

CHAPTER ONE

INTRODUCTION AND REGULATORY FRAMEWORK

1.1 Background and Purpose of This EMP

Mr. Chimasi Paul Amaechi Obasi owns a plot of land at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North Local Government Area, Anambra State. The plot measures 522 square metres. The proposed building will occupy a footprint of 279 square metres, leaving 168 square metres of free compound space for parking, drainage, waste management and landscaping. The building will stand three floors above ground ground floor, first floor and second floor with two self-contained flats on each floor, giving six residential units in total.

The compound is fully enclosed by a perimeter fence and gate on all sides, including the front facing the access road. This pre-existing enclosure is an important asset from an environmental management perspective: it contains construction dust within the site boundary, restricts unauthorised access, secures materials and provides a defined perimeter for monitoring compliance throughout the construction period.

Compound infrastructure will include six car parking spaces, a borehole with solar-powered submersible pump and rooftop overhead storage tank, a soakaway pit and septic tank sized for six-flat occupancy, a concrete-lined stormwater catchment pit, a covered waste bin container at the compound frontage, solar-powered CCTV cameras, solar-powered LED security lights and the existing perimeter fence and gate. Construction is carried out primarily by manual labour. A generator is on site used exclusively for pumping water from the borehole for construction purposes. It is not used to power any construction equipment.

This document is the Environmental Management Plan for the project, prepared in compliance with Part 8 of the Anambra State Environmental Management, Protection and Administration Law, 2024. It covers the pre-construction, construction and operational phases. Before construction begins, the proponent will register the project in the Public Registry of the Anambra State EIA Committee and observe the statutory public comment period under Part 8 of the 2024 Law.

1.2 Project Need and Justification

Peace Estate, Otoko, sits within the expanding residential corridor of Isu Aniocha, Awka North LGA. The estate represents an early-stage planned residential development, with plots being progressively acquired and built upon by individual owners. The Smooth Diamond Crescent location is part of this organic residential growth, reflecting the demand for self-contained residential accommodation within reachable distance of the Awka capital city facilities, public services and employment centres.

Six self-contained flats, each providing private kitchen, bathroom and toilet facilities, respond directly to this demand. The configuration of two flats per floor across three floors is well matched to the 522 square metre plot: the 279 square metre building footprint leaves 168 square metres of free compound space adequate for six parking spaces, drainage infrastructure, the waste container, solar equipment and landscaping without overcrowding the site. The solar-powered water pump, CCTV and security lights reflect a practical design choice suited to the area's EEDC grid reliability conditions and the security expectations of self-contained flat tenants.

The fully fenced and gated compound, already in place before construction begins, adds both a practical and a community benefit: it distinguishes this development as a well-planned, managed residential compound rather than an open building site, and it signals to the Peace Estate community that the proponent intends to maintain the compound to a standard consistent with the residential character of the estate.

1.3 Scope and Structure of This EMP

This EMP covers the full project lifecycle from pre-construction preparation through construction to the operational phase when tenants occupy the six flats.

Table 1.1: EMP Report Structure and Chapter Summary

Chapter	Subject Matter
Chapter 1: Introduction and Regulatory Framework	Project background, need and justification. Full legal and regulatory framework. EMP objectives and Terms of Reference.
Chapter 2: Project Description and Site Setting	The proposed building, its six flats and all compound infrastructure. Construction method and sequence. Site location, topography, surroundings, sensitive receptors and key design features.

Chapter 3: Baseline Environmental and Social Conditions	Measured air quality, noise, groundwater and soil baseline data. Climate, geology and hydrology. Social baseline including land use, sensitive neighbours and community consultation.
Chapter 4: Impact Mitigation and Monitoring Plan	Core technical chapter. All potential impacts by phase with significance rating, mitigation measures, monitoring indicators, frequency and responsible parties.
Chapter 5: Implementation Arrangements	Institutional roles and responsibilities. Community consultation record. Grievance redress mechanism. Emergency response procedures and implementation schedule.

1.4 Legal and Regulatory Framework

The instruments below govern this project and have directly informed the preparation of this EMP. The monitoring and mitigation measures in Chapter 4 are designed to ensure compliance with each one.

Table 1.2: Legal and Regulatory Framework

Regulatory Instrument	Relevance to This Project
Anambra State Environmental Management, Protection and Administration Law, 2024	Primary governing law. Part 8 requires an EMP and Public Registry registration before development commences. Part 7 and Section 216(1) require Wastewater Clearance from the Wastewater Management Office before the building is occupied. Part 9 prohibits nuisances including noise, dust and odour that affect neighbours with direct relevant given the bungalow sharing the south boundary fence. Part 10 governs solid waste management and requires ASWAMA-licensed collectors. Part 11 places drainage maintenance obligations on premises occupiers. Part 2 requires ANSEWCCA approval for drainage connections from the compound to the public road drain. Sections 79 and 80 require landscaping of perimeter areas and a minimum 3-metre setback from the fence to any drainage feature. Section 315 requires community notification and consultation before commencement.
EIA Act, Cap E12, LFN 2004 and EIA Procedures and Charges Regulations, 2021	Federal EIA framework. A three-floor six-flat residential building falls within Category III of the Fifth Schedule to the 2021 Regulations, indicating a project with essentially beneficial environmental characteristics. The Second Schedule sets out minimum EMP content requirements, all of which this report satisfies in full.

NESREA Act, 2007	National environmental standards authority. NESREA ambient air quality standards and occupational health and safety references apply throughout this EMP. The NESREA Act also empowers enforcement of compliance with national environmental regulations at project sites.
National Environmental (Sanitation and Wastes Control) Regulations, 2009	Requires waste segregation at source, the engagement of licensed waste collectors for all construction and operational waste streams, and strictly prohibits open dumping and on-site burning. Both the construction and operational phases are covered.
NESREA National Ambient Air Quality Standards and Ambient Noise Standards	PM10: 116 ug/m ³ ; PM2.5: 25 ug/m ³ ; NO ₂ : 0.085 mg/m ³ ; CO: 50 mg/m ³ (24-hour averages). Daytime noise: 50 to 60 dBA for residential and mixed-use areas. These are the numerical reference limits for the baseline measurements in Chapter 3 and the monitoring targets in Chapter 4.
WHO Guidelines for Drinking Water Quality and Nigerian Standard for Drinking Water Quality (NSDWQ) 2015	Reference benchmark for the groundwater quality assessment at the on-site borehole in Chapter 3. Also governs the design standard for the borehole casing and headwork to protect the compound water supply from surface contamination throughout construction.
National Environmental (Electrical/Electronic Sector) Regulations, 2011	Governs end-of-life disposal of solar panels, battery banks, CCTV units and inverter equipment. Spent batteries and electronic components must be returned to a licensed recycler and cannot be placed in the compound general waste bin.
World Bank Environmental and Social Standard 2 (ESS2) and ESS10	International best-practice references adopted for occupational health and safety (ESS2) and for stakeholder engagement and grievance redress (ESS10). The community consultation and grievance mechanism in Chapter 5 follow ESS10 principles.

The numerical environmental standards applicable to this project are consolidated below for quick reference.

Table 1.3: Applicable Environmental Standards and Numerical Limits

Parameter	Standard / Limit	Regulatory Source
PM10 (24-hour average)	116 ug/m ³	NESREA National Ambient Air Quality Standards
PM2.5 (24-hour average)	25 ug/m ³	NESREA / WHO

Nitrogen Dioxide, NO ₂	0.085 mg/m ³	NESREA
Carbon Monoxide, CO	50 mg/m ³	NESREA
Daytime noise (residential / mixed-use)	50 to 60 dBA	NESREA National Ambient Noise Standard
Drinking water pH	6.5 to 8.5	WHO / NSDWQ 2015
E. coli in drinking water	0 cfu/100 mL - must be absent	WHO / NSDWQ 2015
Soil pH	6.0 to 8.0	NESREA Interim Soil Quality Reference Values
Soil lead	85 mg/kg	NESREA
Wastewater effluent pH (discharge)	6.0 to 9.0	NESREA Effluent Limitations

1.5 Objectives of This EMP

1. Impact Identification

To identify all likely environmental and social impacts of constructing and operating this three-floor, six-flat building at No. 6, Smooth Diamond Crescent, taking full account of the immediately adjacent bungalow at the south boundary, the one-storey building across the road to the south-west, the waterlogged access road along the west boundary and the manual construction method.

2. Mitigation

To set out practical, affordable and workable mitigation measures for each identified impact, designed for implementation by the proponent and site supervisor using locally available resources, except where a licensed specialist contractor is specifically required by law.

3. Monitoring

To establish a simple but robust monitoring framework that the proponent and site supervisor can apply throughout the project lifecycle to track compliance with every mitigation measure and detect any emerging problem before it affects neighbours or the environment.

4. Regulatory Compliance

To demonstrate full conformity with the Anambra State Environmental Management, Protection and Administration Law, 2024, the Federal EIA Procedures and Charges Regulations, 2021, and all other applicable instruments listed in Table 1.2.

5. Stakeholder Accountability

To record the outcome of the community consultation, establish an accessible grievance mechanism for the bungalow occupants and other neighbours, and assign clear EMP responsibilities to every party involved in the project.

1.6 Terms of Reference

This EMP has been prepared in accordance with the Terms of Reference for the environmental assessment of the proposed three-floor commercial residential building at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA, Anambra State, as derived from the requirements of 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 TOR includes:

- a) Description of the proposed development, construction method and all compound infrastructure features including the solar-powered water pump, solar CCTV, solar LED security lights, borehole, overhead tank, soakaway pit and septic tank.
- b) Baseline environmental and social conditions at and immediately surrounding the project site, supported by field measurements of air quality, noise, groundwater quality and soil quality.
- c) Identification of likely environmental and social impacts across all project phases, with particular attention to the bungalow sharing the south boundary fence, the one-storey building across the road, the waterlogged access road and the compact 168 square metre free compound space.
- d) Practical mitigation measures for each identified impact, implementable by the proponent and site supervisor using locally available resources.
- e) A monitoring framework specifying the indicator, method, frequency and responsible party for each significant impact.

- f) A community consultation record confirming that affected neighbours were notified and consulted before construction commences, in accordance with Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024.
- g) A grievance redress mechanism accessible to all affected persons throughout the construction and operational phases.
- h) Institutional responsibilities, emergency response procedures and a project implementation schedule.
- i) An assessment of compliance with applicable national and state environmental regulations and standards.

CHAPTER TWO

PROJECT DESCRIPTION AND SITE SETTING

2.1 Project Overview

The table below provides a complete summary of all key project characteristics.

Table 2.1: Project Overview and Key Characteristics

Project Feature	Detail
Project Name	Construction of a Three-Floor Commercial Residential Building, No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North
Proponent	Mr. Chimasi Paul Amaechi Obasi
Project Address	No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA, Anambra State
Plot Area	522 square metres
Building Footprint	279 square metres
Free Compound Space	168 square metres (parking, drainage, waste management and landscaping)
GPS Boundary Coordinates	NW: 6.270735, 7.039265 NE: 6.270689, 7.039468 SW: 6.270909, 7.039329 SE: 6.270849, 7.039509
Site Elevation	Approximately 220 feet above sea level
Building Configuration	Three floors: ground floor, first floor and second floor. Two self-contained flats per floor. Total: six flats.
Parking	Six designated vehicle parking spaces within the compound
Compound Boundary	Fully fenced on all four sides with a vehicular and pedestrian gate at the front facing Smooth Diamond Crescent. Fence and gate are already in place.
Stormwater Management	Concrete-lined stormwater catchment pit at the natural low point of the compound. Designed to hold runoff from a minimum 25 mm rainfall event

	over the compound area. Controlled overflow pipe to the road drain at Smooth Diamond Crescent, subject to ANSEWCCA approval before installation.
Sanitation	Soakaway pit and septic tank within the compound, sized for six-flat occupancy. Each flat has a private bathroom and toilet. Septic tank to be desludged by a licensed cesspit emptier at least once every two years.
Water Supply for Construction	Generator-powered pump draws from the on-site borehole into storage drums and jerry cans. Generator used for pumping only; switched off immediately after.
Water Supply for Operational	Solar-powered submersible pump draws from the compound borehole and fills a rooftop overhead storage tank. Pressure pipes serve all six flats. Solar battery bank ensures supply during grid outages and low-sun periods.
Electricity Supply	EEDC grid connection for the six flats. Solar system powers the borehole pump, CCTV cameras and security lights independently.
Solar Security Lights	Solar-powered LED security fittings at the compound entrance, parking area and internal stairwells. Motion-activated. Connected to the solar battery bank.
CCTV	Solar-powered CCTV cameras at the compound entrance and at the parking area. DVR unit inside the building. Footage retained for a minimum of thirty days.
Solid Waste	Covered waste bin container at the compound frontage, accessible to the licensed collection vehicle from Smooth Diamond Crescent without the vehicle entering the compound. ASWAMA-licensed collector engaged before first occupation.
Construction Method	Primarily manual hand tools. Generator on site for borehole water pumping only. No mechanical concrete mixer, no compressor, no vibrator, no generator-powered angle grinder at any stage.

Main Materials	Sandcrete blocks, sharp sand, bagged cement, iron rods and binding wire, timber purlins, roofing sheets, window and door frames, floor tiles, plumbing and electrical fittings, solar panels and battery bank, inverter, CCTV equipment.
Construction Duration	Approximately four to six months (phased floor by floor)
Workforce	Eight to twelve manual workers at peak; recruited locally from Otoko, Isu Aniocha and Awka North where possible. Licensed borehole driller. Licensed solar installer.

2.2 Site Location and Physical Setting

Google Maps

6°16'14.9"N 7°02'21.6"E

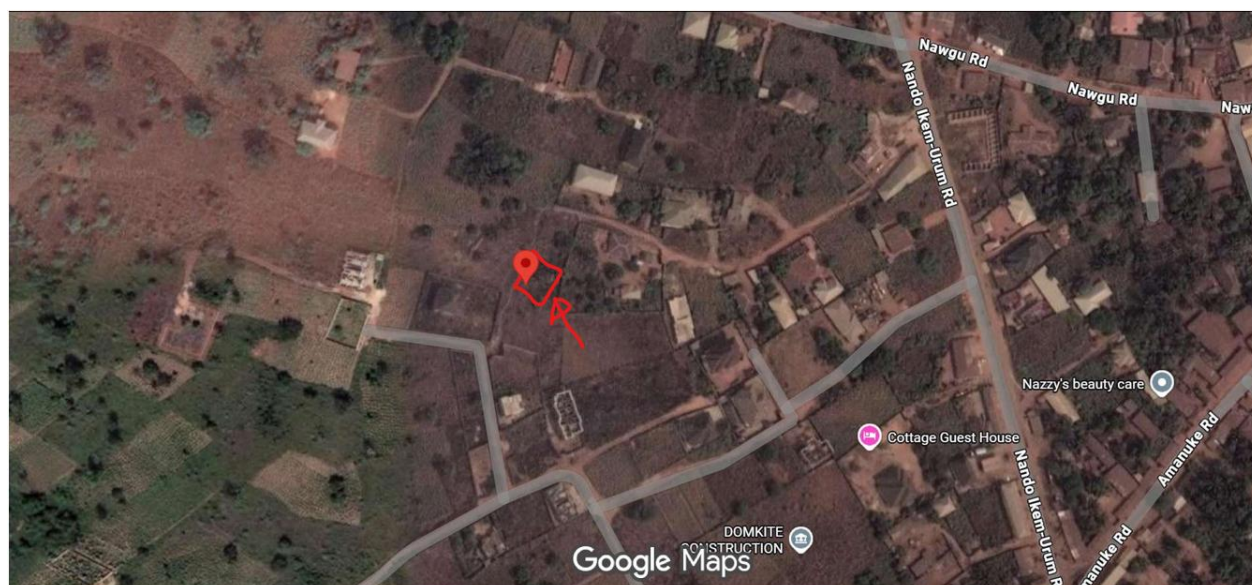


Figure 2.1: Google Map of the Site location

The project site at No. 6, Smooth Diamond Crescent lies within Peace Estate, Otoko, which is part of the Isu Aniocha area of Awka North LGA. The estate is a developing residential neighbourhood situated north of the older core of Otoko and connected to the wider Awka North urban area by the estate's internal road network. Smooth Diamond Crescent is one of the estate's internal streets, providing direct vehicular and pedestrian access to the site.

The site elevation is approximately 220 feet above sea level. The topography is flat with no significant grade change across the 522 square metre plot. The natural low point within the compound by the corner at which the stormwater catchment pit will be positioned will be confirmed by a hand-level survey at the start of construction. The soil profile is sandy loam throughout the depth of the proposed foundations, consistent with the coastal plain sands geology that underlies the Awka metropolitan area. Sandy loam supports manual excavation at shallow foundation depths without significant trench wall collapse risk, and provides free-draining surface conditions.

The access road, Smooth Diamond Crescent, is untarred and becomes waterlogged after heavy rain. This is the single most significant access challenge for this project: delivery vehicles risk becoming stuck or damaging the road surface during and immediately after heavy rain events. All delivery scheduling must account for this condition, and the proponent must maintain a practical road repair kit on site for use when delivery vehicles damage the road surface.



Plate 1: The picture of the Site premises.



Plate 2: The picture of the street at the front of the site

The compound is fully enclosed by a perimeter fence and gate that were in place before construction began. This is a significant environmental management asset: it eliminates the pre-construction fence erection step required on most comparable sites, contains dust within the boundary from the first working day and prevents unauthorised access to the site throughout the construction period.

The site is not within or adjacent to any protected forest, nature reserve, heritage site, wetland or other environmentally sensitive area as defined by the Fifth Schedule to the EIA Procedures and Charges Regulations, 2021.

2.3 Site Surroundings and Sensitive Receptors

Unlike a purely open or agricultural site, No. 6, Smooth Diamond Crescent has a mixed neighbourhood with both vacant and occupied properties within the immediate zone of influence. The site boundaries and their associated sensitive receptors are described below and summarised in the table.

The most important receptor is the completed bungalow that shares the south boundary fence directly with the project site. The bungalow is in active occupation and its occupants live immediately adjacent to the construction activity throughout the entire building programme. This means that dust from cement mixing, construction noise during working hours, and the direction of any surface water drainage from the compound are all direct concerns that must be managed from the first day of

construction to the last. The bungalow occupants received special attention at the community consultation and their concerns are addressed with dedicated mitigation measures in Chapter 4.

Across Smooth Diamond Crescent to the south-west, a completed one-storey building is also occupied. It is separated from the project site by the width of the access road. This building is a secondary but real receptor for road noise during deliveries, dust from the site frontage and any deterioration of the road surface caused by delivery vehicles.

Table 2.2: Site Surroundings and Sensitive Receptors

Boundary / Direction	What Is There	Occupancy Status	Primary Environmental Concern
North	Empty plots; no structures	Vacant	Dust dispersal in harmattan direction; no immediate occupied receptor
East	Empty plots; no structures	Vacant	Dust dispersal; no immediate occupied receptor
South - shared fence	Completed bungalow	Actively occupied	HIGHEST PRIORITY: dust from mixing, noise during work hours, surface drainage toward this boundary
West - Smooth Diamond Crescent	Untarred access road; waterlogged after rain	Public road	Vehicle access for deliveries; road damage and waterlogging; pedestrian safety
South-west - across road	Completed one-storey building	Actively occupied	Delivery vehicle noise; road dust; access road condition
On-site borehole	Construction and future domestic water source	In active use for construction	Contamination from cement slurry, mortar wash water or waste near headwork

2.4 Construction Activities and Sequence

All construction work is carried out by hand using manual tools. The generator on site is used exclusively for borehole water pumping and is switched off as soon as the drums are filled. The construction sequence is set out below and forms the basis for the phase-by-phase impact assessment in Chapter 4.

Table 2.3: Construction Activities and Sequence

Phase	Activity	Method and Notes
Pre-Construction	Regulatory and administrative preparation	Submit this EMP to the Anambra State Ministry of Environment. Register in the Public Registry of the Anambra State EIA Committee and observe the public comment period. Obtain the Awka North LGA building approval before any building work begins. Keep copies of all approvals on site throughout construction. Obtain ANSEWCCA approval for the catchment pit overflow pipe connection to the Smooth Diamond Crescent road drain before the pipe is installed. Notify all immediately adjacent neighbours, particularly the south boundary bungalow occupants, at least fourteen days before the first working day.
Pre-Construction	Site preparation and material stockpiling	The compound is already fully fenced. Confirm all fence panels and gate are in sound condition before materials arrive. Designate a stockpile corner for blocks, sand and cement within the compound, away from the south boundary fence. Sand and cement covered with tarpaulins at all times. Material deliveries scheduled only when Smooth Diamond Crescent is dry and firm, never immediately after heavy rain.
Construction	Foundation excavation and concrete casting	Hand excavation of foundation trenches using shovels and head pans. Given the compact free space of 168 square metres, spoil management is a priority: excavated soil to be placed in one designated area and reused for backfilling immediately after each casting. Manual mixing on a mixing board positioned away from the south boundary fence and the borehole headwork. Generator pumps water to mixing drums; generator is switched off after pumping.
Construction	Soakaway pit and septic tank construction	Soakaway pit hand-excavated and lined with open-jointed brickwork to the depth specified by the design. Septic tank constructed in reinforced concrete, sized by a qualified engineer for six-flat occupancy. Tank vented above roof level. Outlet pipe connected to the soakaway. Both structures completed and fully covered before any flat is occupied. Soakaway pit to be positioned a minimum of fifteen metres from the borehole headwork — this separation must be measured and confirmed on site before excavation begins.
Construction	Stormwater catchment pit	Hand-excavated at the natural low point of the compound. Concrete-lined on walls and base. Inlet screen fitted. Overflow pipe installed to the Smooth Diamond Crescent road drain after ANSEWCCA approval is confirmed. The pit must be fully

		operational before the first rainy season of the construction period. Given the compact compound area, the drainage path from all working areas to the pit must be maintained clear at all times during construction.
Construction	Block laying, ground to second floor	Sandcrete blocks laid floor by floor using trowel and mortar. Blocks carried from the stockpile by hand or wheelbarrow. Workers at first floor level and above must wear hard hats at all times. Scaffolding inspected by the site supervisor before any elevated work begins on that level. The occupied bungalow at the south boundary requires particular attention during block laying on the south face of the building: workers must not allow blocks, tools or mortar to fall beyond the south boundary fence.
Construction	Lintel and column construction	Steel rods bent and bound by hand. Timber shuttering erected manually. Concrete mixed and poured in controlled lifts by hand. Shuttering struck after a minimum of twenty-one days of curing. Columns inspected at each floor level before block laying resumes.
Construction	Roofing works	Timber wall plates, purlins and ridge board positioned manually by a coordinated team. Roofing sheets passed up from ground level using a minimum two-person relay. No worker to be on the roof alone at any time. The second-floor roof edge overlooking the south boundary bungalow requires a safety barrier or plank edge guard during roofing to prevent any tool, nail or sheet sliding off toward the bungalow.
Construction	Plastering, screeding and finishing	All surfaces plastered by hand trowel. Screed mixed and laid manually. Tiles cut by hand cutter and laid with adhesive mortar. Painting with low-VOC products where available. Flats ventilated during painting and for at least 48 hours after completion in each unit.
Construction	Electrical, plumbing and solar installation	Wall chases cut by hand chisel. Conduit and plumbing installed by hand. EEDC connection arranged through a licensed electrician. Licensed solar installer mounts rooftop panels, installs battery bank and inverter in a ventilated dedicated space, installs CCTV cameras and security lights and cables all systems in conduit.
Post-Construction	Site clean-up and occupation preparation	All construction waste removed from the compound within fourteen days of practical completion. Inert rubble reused to compact the parking area surface. Remaining waste removed by a licensed collector. Parking area defined with concrete wheel stops or painted markings. Compound perimeter areas landscaped and beautified before first occupation, in compliance with Section 79

		of the Anambra State Environmental Management, Protection and Administration Law, 2024.
Operational	Occupation and compound management	Six flats let to tenants under written tenancy agreements incorporating compound waste rules, quiet hours (22:00 to 06:00), CCTV notice, septic tank usage rules and parking rules. Landlord responsible for waste collection contract, septic tank desludging, catchment pit maintenance, solar system servicing and security lights and CCTV upkeep.

2.5 Key Infrastructure Features

The following infrastructure features have specific environmental management implications and are described individually below.

2.5.1 Perimeter Fence and Gate

The compound is already fully enclosed by a perimeter fence and gate on all four sides, including the front facing Smooth Diamond Crescent. This pre-existing enclosure provides an immediate environmental management advantage over sites where fencing must be erected as the first construction task. From the first working day, all construction dust is contained within the compound boundary, materials are secured, and the compound can be closed and locked outside working hours. The fence condition must be inspected before construction begins and any damaged or loose panel repaired before materials are delivered.

2.5.2 Stormwater Catchment Pit

The 522 square metre plot with 168 square metres of free compound space is more compact than some comparable projects. This means that rainwater falling on the compound has a shorter path to the boundary fence, and an unmanaged drainage event during construction could reach the south boundary bungalow more quickly than on a larger plot. The catchment pit must therefore be excavated and commissioned as the very first construction activity after foundation work begins before the compound soil is disturbed over a large area. It will be positioned at the natural low point of the compound, concrete-lined to prevent lateral seepage toward the south boundary, and fitted with an inlet screen. A controlled overflow pipe, approved by ANSEWCCA before installation, will discharge to the Smooth Diamond Crescent Road drain. The pit's primary function during

construction is to capture any cement-contaminated surface water and prevent it from reaching the bungalow compound, the road surface or the borehole headwork.

2.5.3 Soakaway Pit and Septic Tank

The soakaway pit and septic tank will serve the sanitation needs of all six flats. The septic tank will be designed by a qualified engineer for the six-flat occupancy load. It will be vented above roof level and positioned to allow future desludging vehicle access from the compound entrance without disrupting the parking area. The soakaway pit must be positioned at a confirmed minimum of fifteen metres from the borehole headwork, measured on site before excavation begins. A Wastewater Clearance application under Section 216(1) of the Anambra State Environmental Management, Protection and Administration Law, 2024 will be submitted to the Wastewater Management Office before the first flat is occupied.

2.5.4 Borehole and Solar Water Supply System

The on-site borehole provides construction water during the building phase and will be upgraded for operational use on completion. The generator-powered pump used during construction will be replaced by a solar-powered submersible pump connected to rooftop panels and a battery bank. The overhead storage tank on the building roof will feed pressure pipes to all six flats. The borehole headwork will be sealed and elevated above finished compound level before the ground around it is disturbed by construction activities. An eight-metre exclusion zone around the headwork will be maintained throughout construction, keeping cement mixing, waste storage and wash-down activities away from the borehole.

2.5.5 Solar-Powered CCTV and LED Security Lights

Solar-powered CCTV cameras will be mounted at the compound entrance and to cover the parking area. A DVR unit retained inside the building will store footage for a minimum of thirty days. Solar-powered LED security lights, motion-activated, will be installed at the gate, the parking area and the stairwells. Both systems will be connected to the solar battery bank and will operate independently of the EEDC grid. Given that Peace Estate, Otoko is a developing estate where the nearest occupied structures are the bungalow at the south boundary and buildings across the road, functional security lighting and CCTV are important tenancy security features.

2.5.6 Waste Bin Container and Parking

A covered waste bin container will be positioned at the compound frontage, accessible to the licensed waste collection vehicle from Smooth Diamond Crescent. The container cover will prevent rainwater ingress, wind scattering and rodent access. Six car parking spaces within the 168 square metre free compound space will be defined by concrete wheel stops or painted markings before the first tenant occupies. A vehicle wash point will drain toward the catchment pit. A covered drum for waste oil and vehicle fluids will be provided and its contents removed by a licensed handler quarterly.

CHAPTER THREE

BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

3.1 Introduction and Approach

This chapter presents the environmental and social baseline conditions at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, and its immediate surroundings, as established through field measurement, site inspection and community engagement conducted in May 2026. These baseline conditions are the reference point against which all changes during and after construction will be assessed.

Air quality measurements were taken at three representative points within the compound boundary. Noise measurements were recorded between 09:00 and 15:00 on a normal weekday. A water sample was collected from the on-site borehole and submitted for laboratory analysis. Soil samples were taken from two positions within the proposed building footprint at a depth of zero to fifteen centimetres. Where specific secondary data on climate, geology and hydrology from published sources is available for the Awka North area, it has been used to supplement the field measurements.

The baseline data confirms that the project site is in a clean and undisturbed condition before construction begins. The partially developed, largely residential character of Peace Estate means that baseline conditions are better than a fully urban site but less pristine than a completely open agricultural location. The most significant pre-existing condition affecting environmental management is the occupied bungalow at the south boundary, which is a real and immediate receptor rather than a distant one.

3.2 Climate and Meteorology

The site lies within the tropical wet-and-dry climate zone of south-eastern Nigeria. Mean annual rainfall for the Awka metropolitan area is approximately 1,600 to 1,800 mm, distributed between the rainy season from April to October and the dry season from November to March. Peak rainfall months are July and September, when individual storm events frequently exceed 25 mm in 24 hours and the associated high-intensity runoff is the primary stormwater management challenge for any construction site in the area. The harmattan north-easterly wind, which blows from November

through February, brings dry, dusty air that increases ambient particulate concentrations and makes dust suppression most critical during these months.

At the time of the May 2026 site visit, the early rainy season had begun. Recent rainfall had settled dust and refreshed the site vegetation. The air quality readings below therefore represent near-best-case dry season conditions for this location: the actual dry season harmattan readings would be higher, though still expected to remain within NESREA limits given the residential setting. Dust management measures in Chapter 4 are designed for the worst-case dry season scenario rather than the measured rainy season baseline.

The untarred surface of Smooth Diamond Crescent is particularly vulnerable to waterlogging and soft road conditions during and immediately after heavy rain. This is a known characteristic of the area and is the primary access management constraint for material deliveries throughout the construction period.

3.3 Geology, Soils and Topography

The site is underlain by the coastal plain sands formation that characterises much of Anambra State, overlaid by a sandy loam surface soil. Sandy loam is a workable, well-draining soil type that supports manual foundation excavation without significant trench wall collapse risk at the shallow depths required for a three-floor building. Its free-draining nature limits prolonged surface ponding under undisturbed conditions, but once the surface vegetation is removed and the ground is compacted by construction traffic, absorption rates drop and runoff increases, particularly in a compact compound area of 168 square metres.

The topography is flat at an elevation of approximately 220 feet above sea level. No significant micro-gradient is apparent across the plot, but a hand-level survey at the start of construction will confirm the natural low point of the compound for the catchment pit position. The flat topography means that runoff does not flow quickly off the site, but it also means that standing water can accumulate in low spots if drainage is not properly directed toward the pit.

3.4 Ambient Air Quality

Air quality measurements were taken at three sampling points within the compound boundary on the morning of the May 2026 site inspection. Conditions were post-rainfall, with calm to light wind. Results are compared against the NESREA National Ambient Air Quality Standards.

Table 3.1: Baseline Ambient Air Quality Results

Parameter	NESREA Standard	Point 1	Point 2	Point 3
Total Particulate Matter (TPM) ug/m3	250	58	63	51
PM2.5 (ug/m3)	25	12	14	11
PM10 (ug/m3)	116	38	42	35
Nitrogen Dioxide NO2 (mg/m3)	0.085	<0.005	<0.005	<0.005
Carbon Monoxide CO (mg/m3)	50	<1.0	<1.0	<1.0
Sulphur Dioxide SO2 (mg/m3)	0.01	ND	ND	ND
Hydrogen Sulphide H2S (mg/m3)	0.008	ND	ND	ND

ND = Not Detected at instrument detection limit.

All readings are well within applicable NESREA limits across all three measurement points. The particulate levels measured at TPM of 51 to 63 ug/m3 and PM10 of 35 to 42 ug/m3 reflect the mixed residential and partially developed character of Peace Estate under post-rainfall conditions. Point 2 records the marginally highest readings, consistent with its position nearest to the compound entrance and Smooth Diamond Crescent, where occasional passing vehicles on the untarred road surface contribute a small additional dust load. Nitrogen dioxide, carbon monoxide, sulphur dioxide and hydrogen sulphide are all below detection limits, confirming the absence of any significant combustion or industrial emission source in the immediate vicinity.

Dry season baseline conditions will produce higher particulate readings than those measured here. Based on comparable Peace Estate residential sites and published data for the Awka North area during the harmattan, conservative dry season estimates would place TPM in the range of 90 to 140 ug/m3 and PM10 in the range of 65 to 95 ug/m3, still within NESREA limits but at levels where cement dust from manual mixing would make a more visible contribution. The dust mitigation measures in Chapter 4 are designed for this dry season worst case, not for the cleaner conditions observed at the time of measurement.

3.5 Ambient Noise Environment

Ambient noise levels were measured at all four boundary positions of the compound between 09:00 and 15:00 on a normal weekday. The applicable reference standard is the NESREA daytime noise

limit of 50 to 60 dBA for residential and mixed-use areas. The dominant ambient sounds during the measurement period were worker conversation inside the compound and the occasional sound of manual tools. No mechanised equipment, generator, road traffic or nearby commercial activity was audible at the time of measurement.

Table 3.2: Baseline Ambient Noise Levels

Measurement Location	Measured Level (dBA)	NESREA Limit (dBA)	Assessment and Notes
North boundary (facing empty plot)	39.2	50	Satisfactory. No occupied buildings to north. Open plot provides acoustic buffer.
East boundary (facing empty plot)	37.8	50	Satisfactory. Quietest boundary. Open plot to east.
South boundary (shared with bungalow)	44.6	50	Satisfactory. The bungalow is the primary acoustic receptor. Measured level includes occasional domestic sounds from the bungalow itself.
West boundary (Smooth Diamond Crescent frontage)	47.1	50	Satisfactory. Highest reading, attributable to occasional pedestrian footsteps, motorcycle movements and ambient sounds from the access road.

All four boundary readings are within the NESREA 60 dBA daytime limit. The south boundary, at 44.6 dBA, is the most important reference point because the bungalow is an active residential receptor at this boundary. Manual construction hand tools typically produce sounds in the range of 55 to 68 dBA at one metre from the source. At the distance between the building face and the south boundary fence which is constrained by the compact compound some of this construction noise will reach the bungalow at levels that are audible and potentially disruptive during the working day. This is managed not by sound attenuation measures but by strict working hours discipline: no construction before 08:00 and none after 17:00, Monday to Saturday. The south boundary measurement of 44.6 dBA also confirms that the existing ambient noise level at this receptor is quiet, making the working hours limit the most effective and straightforward management tool.

The generator, used intermittently for borehole water pumping, typically produces approximately 65 to 72 dBA at one metre. At the south boundary, with the generator positioned away from the south fence, the expected contribution is approximately 55 to 62 dBA. Generator runs are to be limited to the minimum time needed to fill the drums typically thirty to forty-five minutes per session and the generator is to be switched off immediately after pumping is complete, in accordance with the noise management measures in Chapter 4.

3.6 Groundwater Quality

A water sample was collected from the on-site borehole currently in use for construction water pumping. This borehole will become the permanent domestic water supply for all six flats after the solar pump is installed. The sample was taken, labelled and submitted for laboratory analysis against the Nigerian Standard for Drinking Water Quality (NSDWQ) 2015 and the WHO Guidelines for Drinking Water Quality.

Table 3.3: Baseline Groundwater Quality for On-Site Borehole

Parameter	WHO / NSDWQ Limit	Measured Result
pH	6.5 to 8.5	7.0
Turbidity (NTU)	5	2.2
Total Dissolved Solids, TDS (mg/L)	500	108
E. coli (cfu / 100 mL)	0 - must be absent	0 (absent)
Total Coliforms (cfu / 100 mL)	0 - must be absent	0 (absent)
Colour (Hazen units)	15	4
Total Hardness (mg/L as CaCO ₃)	200	42
Nitrate (mg/L as NO ₃)	50	5.4
Chloride (mg/L)	250	16
Iron (mg/L)	0.3	<0.05

The borehole water quality is good and suitable for domestic use across all measured parameters. The pH of 7.0 is neutral and within the acceptable range. The very low TDS of 108 mg/L and turbidity of 2.2 NTU confirm a clean, clear water source. The complete absence of E. coli and total

coliforms confirms that the borehole casing is structurally sound and the water is bacteriologically safe. The low nitrate reading of 5.4 mg/L is far below the 50 mg/L limit which confirms that there is no significant nitrogen loading from agricultural activity, pit latrines or septic tanks in the groundwater in the vicinity. The low iron and chloride readings confirm no industrial or saline contamination.

Protecting this baseline quality throughout construction is essential, since the borehole becomes the permanent water supply for all six flats and their tenants. The primary risks during construction are cement slurry or mortar wash water infiltrating the soil near the borehole casing, and waste materials being stored or disposed of within the borehole's zone of influence. These risks are addressed by the eight-metre exclusion zone around the borehole headwork and the designated wash-down area measures described in Chapter 4.

3.7 Soil Quality

Surface soil samples were collected from two positions within the proposed building footprint at a depth of zero to fifteen centimetres. Results are compared against the NESREA Interim Soil Quality Reference Values.

Table 3.4: Physicochemical Parameters of Soil sample for the Site

Parameter	NESREA Reference Value	Measured Average
pH	6.0 to 8.0	6.6
Soil Texture	Not applicable	Sandy loam
Organic Matter (%)	Informational	1.9
Total Nitrogen (%)	Informational	0.10
Lead (mg/kg)	85	3.8
Cadmium (mg/kg)	0.8	<0.1
Chromium (mg/kg)	100	2.8
Total Petroleum Hydrocarbons, TPH (mg/kg)	50	<5
Polycyclic Aromatic Hydrocarbons, PAH (mg/kg)	40	<1

The soil is clean and uncontaminated across all measured parameters. Lead, cadmium and chromium concentrations are negligible, confirming no history of industrial waste disposal or heavy metal contamination on the site. Total petroleum hydrocarbons and polycyclic aromatic hydrocarbons are both below the analytical detection limit, confirming the absence of fuel spillage or petroleum product contamination. The pH of 6.6 is slightly acidic, which is characteristic of the sandy loam soils of the Awka North area and falls comfortably within the NESREA acceptable range.

The organic matter content of 1.9 percent and total nitrogen of 0.10 percent are consistent with a residential plot that has carried lawn or garden vegetation without any intensive agricultural cultivation. The sandy loam texture provides the free-draining conditions needed for both the soakaway pit and the stormwater catchment pit to perform as designed.

3.8 Social Baseline

Socio-economic information for the neighbours of this project came from direct household engagement rather than a written survey. A community consultation meeting was scheduled at the project site for May 5, 2026, in line with Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024, but did not hold as planned, since the invited participants did not turn up at the set time. The project team then visited the identified stakeholders directly over the following days, meeting five people at different times. These included the occupants of the south boundary bungalow, the occupants of the one-storey building across Smooth Diamond Crescent, and other identified Peace Estate residents and stakeholders. Each visit followed the same pattern: the project was explained, concerns were noted down, and the resident's position on the project was recorded. A sample of the record sheet used for these visits is attached as Appendix , and the outcome is summarised in the table below.

3.8.1 Land Use and Community Character

Peace Estate, Otoko, is a developing residential estate within the Isu Aniocha area of Awka North LGA. The estate is characterised by a mix of completed residential buildings, buildings under construction and vacant plots, which is typical of a private estate in its early development phase. Smooth Diamond Crescent, on which the project site fronts, is an internal estate road that is untarred and serves a small number of existing buildings and plots. The general character of the estate is quiet

and low-density, with none of the commercial, industrial or high-traffic uses that would significantly amplify construction-related nuisance.

The bungalow at the south boundary is a completed and occupied single-storey building. Based on the site inspection observations, the bungalow is occupied by a household that lives and conducts their normal daily activities in close proximity to the south boundary fence. The proximity of this household to the project site is the defining social characteristic of this EMP: every significant environmental management measure in Chapter 4 has been designed with these occupants as the primary affected party.

3.8.2 Land Tenure and Displacement

The project plot at No. 6, Smooth Diamond Crescent is owned by Mr. Chimasi Paul Amaechi Obasi under lawful title. The compound is already fenced and the plot is unoccupied. There are no unresolved land disputes, competing ownership claims or traditional land rights issues associated with this plot. No person is displaced, relocated or evicted as a result of this project. There are no burial grounds, sacred sites or cultural heritage features on or adjacent to the project plot.

3.8.3 Community Consultation Findings

A community consultation meeting was scheduled to be held at the project site at No. 6, Smooth Diamond Crescent in May 2026 in Igbo and English, in accordance with the requirements of Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024. However, the meeting could not hold as planned because the invited participants failed to show up. After the scheduled time had elapsed, the project team visited the identified stakeholders and residents at their homes and was only able to meet some of them. These included the occupants of the south boundary bungalow, the occupants of the one-storey building across the road to the south-west, and other identified Peace Estate residents and stakeholders.

The main concerns raised by the stakeholders reflected the proximity of the occupied bungalow to the construction site: dust from cement mixing and surface disturbance settling on the bungalow property; drainage from the construction compound running toward the south boundary; construction noise before 08:00 or after 17:00; delivery vehicles damaging and waterlogging the already soft Smooth Diamond Crescent surface; and the long-term management of the completed

compound once it is occupied by tenants. Each of these concerns has been addressed by specific mitigation measures in Chapter 4 and is cross-referenced in the consultation record in Chapter 5.

At the end of each consultation, all participants confirmed their support for the project and stated that the proponent's commitments on dust control, drainage, working hours and road management had addressed their concerns satisfactorily. No objection to the project proceeding was raised. The signed attendance register is held by the proponent and reproduced at Appendix B.

3.8.4 Nearest Sensitive Community Facilities

No schools, primary health centres, places of worship or markets are located within the immediate zone of influence of the construction activities. Peace Estate, Otoko, is a residential estate and the buildings in the vicinity are residential in character. The nearest significant community facility is in the wider Otoko and Isu Aniocha settlement area, at a distance that places it outside any construction impact zone for a project of this scale.

3.8.5 Transportation and Access

Otoko and the rest of Isu-Aniocha sit within Awka North LGA, an area that remains largely rural, and the local road network reflects that. Internal roads such as Smooth Diamond Crescent, on which the project fronts, are untarred, a pattern typical of link and access roads across the LGA rather than a feature of this one street. The main paved route connecting Isu-Aniocha to Awka and neighbouring towns runs through the Isu-Aniocha, Urum, Amanuke and Achalla axis, though stretches of the rural road network in the LGA have long needed attention, particularly where the absence of drains leaves roads waterlogged and difficult to pass in the rainy season. Motorcycles and tricycles, locally called okada and keke, are the everyday way of getting around within the community, alongside private cars and commercial buses on the paved routes, much as in other rural and semi-urban parts of Anambra State.

3.8.6 Waste Management Practices

Waste management across Anambra State is coordinated by the Anambra State Waste Management Authority, ASWAMA, which groups local government areas into urban, semi-urban and rural bands for service and billing purposes. Awka North falls under the semi-urban band, alongside LGAs such as Njikoka, Idemili South and Anaocha. State policy has moved toward organised house to house collection in place of street dumping, but this service reaches the state's major urban centres more

fully than its smaller communities. In a setting like Otoko, households more typically manage their own waste through burning or on-site dumping rather than kerbside collection, in keeping with the general pattern reported across much of rural and semi-urban Anambra State.

3.8.7 Economic Activities and Livelihoods

The economy of Isu-Aniocha, like the rest of Awka North LGA, rests mainly on agriculture. Residents grow yam, cassava, maize and vegetables and also cultivate palm produce, with farming supplying both household food needs and produce for sale in local markets. Small-scale trading and local commerce, run from home compounds, roadside stalls and periodic markets rather than large commercial premises, provide additional income for many households. This is a different economic base from Awka city itself, where government administration and formal commerce are the main drivers.

3.8.8 Population and Settlement Pattern

Isu-Aniocha is a community of moderate size within Awka North LGA, with published estimates placing its population in the range of fifteen to twenty thousand people across an area of roughly fifteen square kilometres. Peace Estate, Otoko, where the project site sits, is one of several private residential layouts that have emerged in this setting in recent years and remains in its early development phase, with a mix of completed buildings, buildings under construction and vacant plots. This part rural, part increasingly residential pattern is typical of communities on the edge of Awka as the city's growth extends outward.

3.8.9 Electricity and Water Supply

As in much of rural and semi-urban Anambra State, public electricity supply in the area is available but not constant, and many households and small developments lean on private generators, solar systems, or a mix of the two, to cover the gaps. Piped public water supply is not consistently available outside the main urban centres, and most households, including this project as described in Section 2.5.4, depend on private boreholes for domestic water. Both patterns place the community somewhere between a fully rural setting and a fully serviced urban one, the broader picture reflected across most of Awka North LGA.

CHAPTER FOUR

ENVIRONMENTAL AND SOCIAL IMPACT MITIGATION AND MONITORING PLAN

4.1 Introduction

This chapter is the working core of the EMP. It identifies every likely environmental and social impact of constructing and operating the proposed building at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, rates each impact, and sets out the specific mitigation measures to be applied. A monitoring programme accompanies each impact, specifying what to check, how to check it, how often and who is responsible.

The defining characteristic of this site compared to other manual residential construction projects in the Isu Aniocha corridor is the occupied bungalow sharing the south boundary fence. This immediately occupied receptor shapes the priority of every mitigation measure in this chapter. Dust, drainage, noise and fall hazard at the south boundary are all rated one level higher than they would be on an open site, because the receptor is immediate rather than distant.

The three-floor building height, the compact 168 square metre free compound space, the waterlogged access road and the generator used for water pumping also introduce specific management requirements that are addressed below.

4.2 Impact Significance Rating

Table 4.1: Impact Significance Rating Scale

Rating	What It Means	Management Expectation
LOW	Short-term, localised and reversible. Manageable through routine good practice.	Standard measures sufficient. Monitor to confirm effectiveness.
MODERATE	Medium-term. Could affect the bungalow, the road or the groundwater if left unmanaged. Requires specific and consistent attention.	Specific mitigation measures implemented and actively monitored throughout the relevant phase.

HIGH	Significant potential harm to people or the environment particularly the bungalow occupants or construction workers if not immediately controlled.	Priority action. Work in the affected area stops until the hazard is under control and the measure is confirmed effective.
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4.3 Pre-Construction Phase

The pre-construction phase covers all activities before the first foundation block is laid. Getting the regulatory approvals, the bungalow notification, the fence inspection and the stockpile organisation right before breaking ground sets the conditions for a well-managed site from the first working day.

Table 4.2: Pre-Construction Phase of Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Regulatory and administrative preparation	Legal exposure if approvals are absent when ground is broken. Rating: MODERATE if not managed.	Submit this EMP to the Anambra State Ministry of Environment. Register the project in the EIA Public Registry and observe the public comment period under Part 8 of the 2024 Law. Obtain the Awka North LGA building approval. Obtain ANSEWCCA approval for the catchment pit overflow pipe connection to the Smooth Diamond Crescent road drain before the pipe is installed. Keep original copies of all approvals in a waterproof folder on site throughout construction.	Proponent	Once before commencement
Notification of bungalow occupants and other neighbours	Antagonism and formal complaints if the bungalow household is not notified	The proponent must visit the bungalow occupants in person at least fourteen days before the first working day. Explain the project, the planned working hours, the	Proponent	Once, at least 14 days before start

	and given a contact number before work starts. Given their shared fence, this is the most important pre-construction social action. Rating: MODERATE.	dust and drainage management commitments and the contact number for the site supervisor. Provide the same notification in writing or verbally to the occupants of the one-storey building across the road. Post the site notice board at the compound gate showing proponent name, supervisor name and both phone numbers before any work begins.		
Fence and gate inspection	Dust leaving the site, material theft and unauthorised access if any fence panel or gate is in poor condition at the start of construction. Rating: MODERATE.	Inspect every panel of the perimeter fence and the gate mechanism before any materials are delivered to the compound. Repair or replace any loose, damaged or missing panel before delivery commences. The gate must be lockable and must remain locked outside working hours throughout the entire construction period. Record the fence inspection outcome in the site logbook.	Site Supervisor	Before commencement; weekly inspection thereafter
Material stockpile layout in compact compound	Blockage of drainage paths and the south boundary working corridor if materials are not organised in the limited 168 square metre free space. Rating: MODERATE.	Before the first delivery, mark out on the compound ground the designated areas for blocks, sand, cement, steel and timber. The stockpile zone must be away from the south boundary fence and must not obstruct the drainage path to the catchment pit location. Sand and cement covered with tarpaulins at all times when not in use. Batches sized to	Proponent / Site Supervisor	Before first delivery; reviewed weekly

		match no more than one week's work at a time to prevent stockpile overflow in the compact space.		
Material deliveries on waterlogged road	Delivery vehicles becoming stuck on Smooth Diamond Crescent or rutting the road surface during or after rain. Rating: MODERATE.	Schedule all material deliveries only when Smooth Diamond Crescent is dry and firm and never within 24 hours after significant rainfall. The site supervisor must check the road condition each morning during rainy season delivery periods. Keep a basic road repair kit on site: sharp sand, shovels and a hand rammer. If a delivery vehicle ruts or damages the road surface, repair it before the end of that working day.	Site Supervisor	Before each delivery
Worker toilet facility	Open defecation contaminating the compound and the south boundary area, creating a health and odour nuisance for the bungalow. Rating: MODERATE - elevated because of proximity to the bungalow.	The soakaway pit and septic tank are among the first structures to be built, providing a permanent toilet from an early stage. Before these are ready, a chemical portable toilet must be placed inside the compound not near the south boundary fence on the first working day. Prohibit open defecation on or near the project site in absolute terms throughout construction. Any worker found in violation is dismissed that day.	Proponent	In place on Day 1; maintained throughout

4.4 Construction Phase

The construction phase covers all building activities from foundation excavation to plastering and finishing. It is organised into seven topic areas below. Given the immediately adjacent bungalow

and the compact compound, dust and drainage toward the south boundary are treated as the highest-priority environmental concerns. Occupational safety during elevated work on the second-floor roof is the highest-priority worker safety concern.

4.4.1 Air Quality, Dust and the South Boundary Bungalow

Dust from cement handling is the primary environmental nuisance risk at this site, amplified by the proximity of the occupied bungalow. During the harmattan months of November to March, cement dust and disturbed soil particles can travel across the short compound width and reach the bungalow on any wind gust. The measures below apply throughout construction but are most critical from November to March.

Table 4.3: Air Quality and Dust for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Manual cement and mortar mixing	Cement dust from bag opening and mixing reaching the bungalow at the south boundary when wind is from the north. Skin and eye irritation to workers. Rating: MODERATE elevated to HIGH during harmattan if mixing board is positioned near the south boundary.	Position the mixing board on the north side of the compound, as far from the south boundary fence as the compound space allows. Wet the mixing board before use. When harmattan wind is blowing from the north toward the south boundary, dampen the area around the mixing board before mixing begins. Open cement bags by cutting with a knife, never by tearing as that releases a visible dust plume. Workers handling or mixing cement to wear dust masks covering nose and mouth and safety goggles at all times during mixing. Eye wash water must be within two metres of the mixing area at all times. After mixing is complete each day, rinse the mixing board in the designated wash-down area before setting it aside.	Site Supervisor	Daily during mixing; check mixing board position each morning

Block cutting and surface chiselling	Fine silica and cement dust from cutting sandcrete blocks. Rating: LOW to MODERATE near south boundary.	Dampen the block surface before cutting. Position the worker so the cut face opens away from the south boundary fence. Worker to wear dust mask and safety goggles throughout cutting. Do not conduct block cutting within three metres of the south boundary fence.	Site Supervisor	As activity occurs
General site surface disturbance	Dust from foot traffic, wheelbarrow movement and material handling on the compound ground surface. Rating: LOW in rainy season; MODERATE in harmattan particularly toward south boundary.	Water all main compound paths and the mixing area twice daily during the dry season months of November to March, and increase to three times daily if dust is visibly reaching the south boundary fence. During harmattan, prioritise watering the south half of the compound in the mornings before work begins, as the north-easterly wind drives dust toward the bungalow throughout the day.	Site Supervisor	Twice daily in dry season; three times during harmattan
Sand stockpile and dry material storage	Wind-blown fine particles from uncovered sand reaching the bungalow compound. Rating: LOW to MODERATE.	Sand stockpile covered with a tarpaulin at all times when not being actively used. Tarpaulin must be anchored to prevent lifting in harmattan wind. Do not stockpile sand within five metres of the south boundary fence. Cement bags to be stored in a sheltered position inside the compound, away from the south fence.	Site Supervisor	Daily check

4.4.2 Noise and the Working Hours Limit

The occupied bungalow at the south boundary makes working hours discipline the single most important noise management tool on this site. Manual construction sounds from hand tools are not excessively loud but are clearly audible to a household sharing a boundary fence. The generator adds a more prominent noise contribution during pumping sessions. Both must be strictly managed.

Table 4.4: Noise and Vibration for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Manual construction: hammering, block laying, chiselling	Construction sounds clearly audible to the bungalow occupants sharing the south boundary fence throughout the working day. Rating: MODERATE if working hours are not respected; LOW within permitted hours.	All construction work limited strictly to 08:00 to 17:00, Monday to Saturday. No work on Sundays or on any Anambra State or federal public holiday. Workers must not shout unnecessarily or create avoidable loud sounds near the south boundary fence. The site supervisor must be at the compound gate by 07:45 each morning to confirm no worker begins before 08:00 and must send workers home by 17:10. Any worker who works outside these hours, however briefly, is subject to a warning for the first occurrence and dismissal for the second.	Site Supervisor	Daily - morning and evening check
Generator for borehole water pumping	Generator noise audible to the bungalow and	Position the generator at the north end of the compound, as far from both the south boundary fence and the road	Site Supervisor	At each use - log start and stop times

	to the one-storey building across the road during pumping sessions. At 65 to 72 dBA at one metre, the generator is the loudest sound source on this site. Rating: MODERATE.	frontage as the compound allows. Direct the exhaust outlet toward the north or east - away from the bungalow and the road. Limit each generator pumping session to the minimum time needed to fill the storage drums, typically thirty to forty-five minutes. Run the generator no more than twice per day. Generator must not be started before 08:00 or after 17:00. Switch off immediately after pumping is complete - no idling.		
Elevated work noise: block tapping and tool sounds at height	Higher-floor construction sounds carry further because they originate above boundary fence height and travel directly to the bungalow without the fence acting as a barrier. Rating: MODERATE.	The working hours limit is the primary control. Workers on the first and second floors must use hand tools at a normal working pace without unnecessary additional impact or hammering. Avoid scheduling the noisiest tasks - continuous heavy hammering or chiselling - for early morning or late afternoon when the bungalow occupants are most likely to be at home and sensitive to noise.	Site Supervisor	Daily observation

4.4.3 Surface Water Drainage and the Compact Compound

The 168 square metre free compound space means that construction site runoff has a very short path from the working areas to the south boundary fence. An unmanaged drainage event could reach the bungalow compound within minutes of a heavy rain event. The catchment pit must be operational before the compound soil is disturbed over a large area. This is non-negotiable.

Table 4.5: Surface Water Drainage and Soil Erosion for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Stormwater catchment pit: commissioning	If the pit is not operational before the first significant rain event after ground is disturbed, cement-contaminated runoff will reach the south boundary bungalow compound and the Smooth Diamond Crescent road surface. Rating: HIGH the compact compound magnifies this risk compared to larger sites.	Excavate and concrete-line the stormwater catchment pit as the first construction activity after foundation works begin, and certainly before the rainy season arrives. The pit must have its inlet screen fitted and overflow pipe installed with the ANSEWCCA-approved connection to the road drain confirmed before any significant rainfall occurs on site. The site supervisor must record the date the pit is commissioned in the logbook and report this to the proponent in writing.	Proponent / Site Supervisor	Commissioned before first rain; inspected after every rain event
Drainage direction in compact compound	Flat compound topography with short distances means any standing water or uncontrolled flow could reach the south boundary fence quickly. Rating: MODERATE.	Grade the compound surface manually throughout construction so that all water flows toward the catchment pit, not toward the south or west boundaries. After every rain event, walk the compound and check that no water is pooling against the south boundary fence or flowing toward the gate. Repair any low spot or channel that is directing water toward a boundary	Site Supervisor	After every rain event

		rather than toward the pit before the next rain event.		
Cement slurry and mortar wash water	Alkaline cement wash water infiltrating soil near the borehole or flowing toward the south boundary where it could stain or damage the bungalow fence. Rating: MODERATE.	Designate one fixed wash-down area inside the compound, on the north side, well away from both the borehole headwork and the south boundary fence. All mixing board rinsing, tool washing and container cleaning to be done in this area only. This area must drain toward the catchment pit. Absolutely no cement slurry to be poured near the south boundary, near the gate or onto Smooth Diamond Crescent.	Site Supervisor	Daily
Foundation trench spoil management in limited space	Excavated sandy loam stockpiled in the compact free space could block drainage paths or erode into the drainage channel if rain arrives. Rating: MODERATE.	Excavate foundation trenches in short sections of no more than three metres at a time given the compact space. Backfill and compact each section immediately after casting before opening the next section. Stockpile excavated soil only in the designated north compound corner. Cover the stockpile with a tarpaulin if rain is forecast within 24 hours and the soil cannot be reused within that period.	Site Supervisor	During all excavation works
Smooth Diamond Crescent waterlogging from site overflow	Overflow from the catchment pit during extreme rainfall discharging to an already waterlogged road surface could worsen road	Inspect the Smooth Diamond Crescent road drain at the overflow pipe outlet at the start of each rainy season and after every significant storm. Clear any blockage in the road drain at the outlet point immediately. Do not allow	Proponent	Monthly; after each storm

	condition and create a nuisance. Rating: LOW to MODERATE.	the overflow pipe to discharge onto the road surface itself only into the road drain channel. If the drain is damaged or absent at the outlet point, notify Awka North LGA Public Works and retain a written record of the notification.		
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4.4.4 Solid Waste Management

In a compact compound with 168 square metres of free space, waste accumulation quickly becomes a management problem. If block rubble, cement bags and food waste are not cleared daily, they obstruct access, block drainage paths and create a nuisance visible to the bungalow occupants. The discipline is simple: everything has a designated bin or pile, and each one is cleared at the intervals below.

Table 4.6: Solid Waste Management for Impact Mitigation and Monitoring

Waste Category	Potential Impact and Rating	Management Measure	Responsible Party	Frequency
Block offcuts, broken blocks and concrete rubble	Obstruction of the drainage path to the catchment pit in the compact compound. Foot injury. Rating: MODERATE - compact space magnifies this risk.	Rubble reused to compact and level the six parking spaces at the end of the construction phase. During construction, rubble stockpiled in a designated corner away from the drainage path. No rubble within two metres of the catchment pit inlet at any time. Excess rubble removed to the Awka North LGA-approved dumpsite at the end of each working week.	Site Supervisor	End of each week
Empty cement bags and material packaging	Wind-blown bags reaching the bungalow compound over the shared	Collect empty cement bags immediately after use. Stack inside the compound away from the south boundary. Sell to local traders at the earliest	All workers	Daily

	south fence. Rating: MODERATE - south fence proximity.	opportunity. All loose packaging placed in the covered waste bin before the end of each working day. No empty bags to be left loose in the compound overnight.		
Workers' food waste and water sachets	Sachets blown toward the south boundary or blocking the catchment pit inlet. Pest attraction from food waste overnight. Rating: LOW.	Covered food waste bin at the workers' rest area on the north side of the compound. All sachets and food packaging into the bin before the end of each day. No food waste to remain in the compound overnight. Workers must not throw sachets toward the south fence.	All workers	Daily
Scrap steel: rod offcuts, nails and binding wire	Foot injury from nails and rod ends in the compact working space. Rating: MODERATE.	Dedicated steel collection bin at the working area. At the end of each working day, all rod offcuts, nails and wire collected from the compound ground before workers leave. Bin contents sold to a local scrap metal dealer weekly. No metal pieces left on the compound ground overnight at any time.	All workers	Daily; sale weekly
Spent generator oil and oil-soaked materials	Soil contamination near the borehole if oil is poured onto the ground. Rating: MODERATE.	Collect all spent generator oil in a sealed metal drum kept away from the borehole headwork and away from the south boundary. Dispose of by a licensed waste oil collector. No oil or oil-soaked rag to be buried or discarded onto the compound soil.	Site Supervisor	As accumulated; quarterly disposal
General on- site waste container	Overflowing container visible to bungalow occupants and	Assess the fill level of the compound waste container each morning. Arrange removal before it reaches capacity. Do not allow the	Site Supervisor	Daily assessment

	creating odour. Rating: LOW to MODERATE.	container to overflow at any time. Keep the area around the container clean no loose waste within one metre of the container.		
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4.4.5 Occupational Health and Safety

The three-floor building height makes elevated work the highest occupational safety risk on this site. A fall from the second-floor roof edge onto the compound or, in the worst case, toward the south boundary bungalow could be fatal or cause serious injury both to workers and to anyone in the bungalow compound. The measures below are non-negotiable throughout the construction period.

Table 4.7: Occupational Health and Safety for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Block laying at first and second floor levels	Falls of workers from elevated levels. Dropped blocks injuring workers below or, on the south face of the building, falling toward the bungalow compound. Rating: HIGH.	All workers at first floor level and above to wear hard hats and safety footwear at all times. Scaffolding or working platforms physically inspected by the site supervisor before work begins at each new level - confirmed stable before any worker stands on them. Establish a two-metre exclusion zone on the compound ground below any active elevated working area. On the south face of the building, given the proximity to the bungalow fence, the exclusion zone must also ensure no block, tool or mortar trough can fall over or through the boundary fence. Do not work on the south face elevated positions without the supervisor physically present.	Site Supervisor (physically present on south face)	Daily before elevated works; continuous during south face work

Roofing works at second-floor roof level	Falls from the roof. Roofing sheets or tools sliding off the south roof slope toward the bungalow. Rating: HIGH - south slope requires additional edge protection.	No worker to perform roofing work alone under any circumstances. At least two workers on the roof at all times during roofing; one additional worker at the eave level throughout. All roof workers wear hard hats, rubber-soled non-slip footwear and gloves. No loose clothing. Sheets passed up from ground level by a controlled two-person relay - no throwing. On the south slope of the roof, fix a temporary timber edge board or plank guard along the eave before roofing begins to prevent any sheet, nail or tool sliding off toward the bungalow. Remove only after all roofing on the south slope is complete and cleared. Site supervisor physically present throughout roofing phase.	Site Supervisor (physically present)	Continuous during roofing
Manual cement mixing and handling	Cement burns to skin and eyes. Prolonged inhalation of cement dust without PPE. Rating: MODERATE.	Rubber gloves, dust mask and safety goggles mandatory for all workers mixing or handling cement. Any skin contact with cement paste washed immediately with clean water for five minutes. Eye contact is an emergency: flush with clean water for fifteen minutes continuously and transport to the nearest health facility immediately. Eye wash water kept within two metres of the mixing area at all times. No worker to begin mixing without PPE in place - supervisor to check before each mixing session.	Site Supervisor	Daily during mixing

Manual lifting and carrying of blocks and materials	Back strain and crush injuries from dropped or uncontrolled heavy loads in the compact working space. Rating: MODERATE.	Single-person loads limited to a weight the worker can carry comfortably for the full distance. Wheelbarrows for all horizontal movement. Given the compact compound, wheelbarrow paths must be clear of rubble and waste before each use - a blocked path in a compact compound forces unsafe carrying. Rotate heavy lifting tasks among workers throughout each day. Weekly Monday toolbox talk to include safe lifting technique.	Site Supervisor	Weekly brief; daily observation
Generator fuelling and operation	Fuel spillage contaminating soil near the borehole. Carbon monoxide from exhaust in a partially enclosed compound. Burns from hot engine. Rating: MODERATE.	Generator positioned on the north side of the compound, away from the borehole headwork and the south boundary fence. Fuel stored in a sealed metal container at least three metres from any building wall. Refuel only when the generator is switched off and cool. Direct the exhaust outlet toward the north or east. Keep a dry-powder extinguisher within three metres of the generator at all times. No worker to remain beside the running generator for more than ten minutes at a time.	Site Supervisor	At each use
General site safety: cuts, nails, foot injuries	Minor injuries from nails, rod ends, sharp edges and tile fragments in the compact working area. Rating: LOW.	All workers to wear robust closed footwear like toe-cap safety boots preferred at all times on site. Workers chiselling or tile cutting to wear goggles. Maintain a fully stocked first aid kit in a weatherproof bag at the compound at all times. Any injury, however minor, recorded in the first aid log	Site Supervisor	Daily kit check; injury recording on the day

		before the end of the working day and reported to the proponent.		
Worker hydration and heat stress	Dehydration and heat exhaustion during dry season manual work, particularly on the upper floors where shade is limited. Rating: LOW to MODERATE.	Provide at least one 20-litre jerry can of clean drinking water per five workers per day throughout the dry season. Ensure a shaded rest area using a tarpaulin canopy or the shade of the existing structure is available at ground level. Workers showing confusion, weakness or heavy sweating to stop work immediately, drink water and rest in shade. Supervisor to actively monitor workers between 12:00 and 14:30.	Proponent / Site Supervisor	Daily

4.4.6 Borehole and Groundwater Protection

The on-site borehole provides construction water now and will be the permanent water supply for all six flats and their tenants after the solar pump is installed. The excellent baseline groundwater quality recorded in Chapter 3 must be maintained throughout construction. The compact compound makes it harder to maintain separation between the mixing area, waste storage and the borehole headwork all three must be actively managed.

Table 4.8: Borehole and Groundwater Protection for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Borehole headwork sealing	Surface water carrying cement, oil or waste entering the borehole through an open or damaged	The borehole headwork must be fitted with a sealed, lockable cap that is removed only when the pump is in use. When the pump is running and the headwork is briefly open, a temporary cover must be placed around the pipe entry to prevent splash water, soil or debris entering the	Site Supervisor	Weekly inspection; check before each pumping session

	headwork cap. Rating: HIGH.	casing. Inspect the cap seal weekly. Elevate the headwork above the finished compound surface level so runoff cannot pool around it. Mark the eight-metre exclusion zone around the borehole with rope or pegs.		
Mixing and wash-down activities near borehole	Cement slurry and alkaline wash water infiltrating the soil near the borehole casing in the compact compound. Rating: MODERATE.	The designated wash-down area must be on the opposite side of the compound from the borehole - in practice, on the north side if the borehole is on the south side, or vice versa. This separation must be maintained throughout construction regardless of how the compound layout evolves. Eight-metre exclusion zone around the borehole headwork: no cement mixing, no waste storage, no tool washing within this zone.	Site Supervisor	Daily check
Soakaway-to-borehole separation	Soakaway pit positioned too close to the borehole, causing effluent to reach the aquifer. Rating: HIGH.	The soakaway pit must be positioned at a minimum of fifteen metres horizontal separation from the borehole headwork. This distance must be measured and confirmed by tape measure on site before soakaway excavation begins. If the compact compound layout cannot achieve fifteen metres, the engineer must redesign the sanitation layout before any excavation proceeds. Record the measured separation in the site logbook.	Proponent	Measured and confirmed before soakaway excavation

4.4.7 Relations with the South Boundary Bungalow and Other Neighbours

Good ongoing communication with the bungalow occupants is the single most important community relations action throughout this project. A shared fence means they experience every aspect of the

construction daily. A small investment of time in regular, respectful contact prevents concerns from becoming formal complaints.

Table 4.9: Community Relations for Impact Mitigation and Monitoring

Activity / Aspect	Potential Impact and Rating	Mitigation Measure	Responsible Party	Monitoring Frequency
Ongoing relations with bungalow occupants	Accumulated minor irritations such as dust, noise, drainage, litter escalating into a formal regulatory complaint if not addressed proactively. Rating: MODERATE.	The proponent personally visits the bungalow occupants at least once every two weeks throughout the construction period to check whether any concern has arisen. This takes fifteen minutes and prevents problems escalating. Record the date and outcome of each visit in the grievance logbook. If the bungalow occupants raise any concern, it must be addressed within 24 hours not deferred to the next visit.	Proponent	Fortnightly visit; 24-hour response to any concern
Site appearance from the road frontage	Loose litter on Smooth Diamond Crescent and at the compound gate creating a negative impression of the project to road users and the wider Peace Estate community. Rating: LOW.	One worker assigned the daily task of clearing the Smooth Diamond Crescent frontage of the compound before leaving the site each day. The compound gate exterior must be kept clean. Waste bin container cover always closed. No materials or rubble placed on the road surface or in the road drain at any time.	Site Supervisor	Daily
Delivery vehicles on Smooth Diamond Crescent	Vehicles blocking the road or damaging its surface during deliveries,	All bulk deliveries between 09:00 and 15:00 on weekdays only. No deliveries within 24 hours of heavy rain. Delivery vehicles must offload inside the compound or at the gate	Site Supervisor	At each delivery

	inconveniencing the bungalow, the across-road building and other road users. Rating: MODERATE.	and leave within twenty minutes. No vehicle parked on Smooth Diamond Crescent for any purpose outside these twenty minutes. Supervisor to be present to direct all vehicles directly off the road as quickly as possible.		
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4.5 Operational Phase

The operational phase begins when the first tenant occupies any of the six flats. Environmental responsibilities shift from the proponent and site supervisor to the proponent as landlord and to any estate manager or caretaker he appoints. The six-flat occupancy level is manageable but requires consistent attention to waste collection, drainage and septic tank maintenance to prevent nuisance to the bungalow at the south boundary and other neighbours.

Table 4.10: Operational Phase for Impact Mitigation and Monitoring

Operational Aspect	Potential Impact and Rating	Management Measure	Responsible Party	Monitoring Frequency
Domestic waste from six flats	Waste accumulating at the compound frontage, attracting pests and creating odour and a visual nuisance to the bungalow occupants sharing the south fence and to Smooth Diamond Crescent. Rating: MODERATE.	ASWAMA-licensed or licensed private waste collector contracted and confirmed before the first tenant takes occupation. Minimum collection frequency of twice per week for a six-flat compound. Covered waste bin container positioned at the compound frontage, accessible from Smooth Diamond Crescent without the vehicle entering the compound. Compound waste rules use the container, no littering, basic organic and dry segregation included in each tenancy agreement and displayed as a notice at the container. Landlord or estate caretaker to	Landlord / Estate Manager	Twice-weekly inspection; twice-weekly collection

		inspect the container twice weekly.		
Septic tank and soakaway management	Septic tank filling faster than design rate if misused; odour if not desludged on schedule; soakaway failure creating a drainage and health nuisance near the south boundary bungalow. Rating: MODERATE to HIGH if neglected.	Include specific septic tank usage rules in all six tenancy agreements: no nappies, sanitary pads, wipes, grease, plastic or solid food waste to be flushed. Post a clear notice at each flat toilet confirming this. Submit the Wastewater Clearance application under Section 216(1) of the Anambra State Environmental Management, Protection and Administration Law, 2024 to the Wastewater Management Office before first occupation. Engage a licensed cesspit emptier to desludge the tank at least once every two years or earlier if any sign of slow drainage or odour is detected.	Landlord	Annual inspection; desludge every 2 years minimum
Stormwater catchment pit: ongoing maintenance	Silting, blocked inlet and mosquito breeding if the pit is neglected during the operational phase. Rating: MODERATE.	Desilt the catchment pit once per year before the rainy season begins. Inspect and clear the inlet screen monthly. If the pit retains standing water for more than three consecutive days after any rain event, arrange controlled emptying to prevent mosquito breeding. Keep a pit maintenance log recording all inspection and desilting dates.	Landlord	Monthly inspection; annual desilting
Compound drainage and gutters	Blocked compound drainage causing flooding toward the south boundary	Monthly clearing of all compound gutters, channels and the catchment pit inlet by the estate caretaker. After every significant rain event, inspect all drainage paths and clear any blockage before the	Landlord / Estate Manager	Monthly; after every heavy rain event

	bungalow. In a compact compound, a blocked drain can fill quickly and overflow toward the shared fence. Rating: MODERATE.	next rain event. This obligation is imposed on premises occupiers by Part 11 of the Anambra State Environmental Management, Protection and Administration Law, 2024. Any drainage that appears to be running toward the south boundary to be corrected immediately contact the landlord the same day if the caretaker cannot resolve it alone.		
Solar water supply and security system maintenance	Inadequate water supply to six flats or security system failure if the solar equipment is not serviced. Rating: MODERATE.	Licensed solar installer to service the full system annually under a maintenance contract. Estate caretaker to clean solar panel surfaces quarterly with a soft cloth and water. Check borehole pump water pressure on all floors monthly any significant reduction reported to the installer. CCTV recording function and security light operation checked weekly after dark. Failed units replaced within fourteen days of identification.	Landlord / Estate Manager	Monthly pressure check; quarterly panel clean; weekly security check
Noise and nuisance from six tenants	Tenant behaviour late-night generator use, loud music, disputes creating nuisance for the bungalow occupants sharing the south boundary fence. Rating: MODERATE	Quiet hours clause (22:00 to 06:00, seven days) in all six tenancy agreements. Tenant-operated generators within the compound must be silencer-fitted and must stop by 22:00. The landlord or caretaker responds to any complaint from the bungalow occupants about tenant behaviour within 24 hours this is the most important ongoing operational obligation	Landlord	Ongoing; 24-hour response to south boundary complaints

	elevated because of the shared south fence.	given the shared fence. Keep a complaint log.		
Landscaping and perimeter setback	Non-compliance with Sections 79 and 80 of the Anambra State 2024 Law if perimeter areas are not landscaped. Rating: LOW if addressed before occupation.	Complete landscaping and beautification of the compound perimeter areas, including the area along the south boundary fence, before the first tenant takes occupation. Maintain a minimum 3-metre setback from the fence to any drainage channel or hardstanding. Green or pave the setback area. Keep the compound frontage on Smooth Diamond Crescent clean and presentable at all times, including on state Sanitation Days.	Landlord	Annual inspection; Sanitation Day compliance

4.6 Consolidated Environmental Monitoring Summary

The table below consolidates all monitoring requirements across all project phases into a single checklist for daily and weekly use by the proponent and site supervisor.

Table 4.11: Consolidated Environmental Monitoring Summary

Aspect	Target / Standard	Indicator Checked	Frequency	Responsible Party
Dust toward south boundary	No visible dust cloud at south fence; no complaint from bungalow	Visual check at south boundary; complaint log	Daily morning and mid-day	Site Supervisor
Noise - working hours	Work 08:00 to 17:00 Mon to Sat only; no Sunday work	Time of first work start and last activity noted in logbook	Daily check at 08:00 and 17:00	Site Supervisor
Generator noise	Running only for pumping; switched off	Generator log start time, stop time, reason for use	At each use	Site Supervisor

	after; no use before 08:00 or after 17:00			
Catchment pit	Pit functional; inlet screen clear; no runoff toward south boundary or road	Visual inspection of pit, inlet and overflow	After every rain event; weekly	Proponent
Compound drainage direction	No water pooling against south boundary fence	Walk south boundary after each rain event	After every rain	Site Supervisor
Borehole headwork	Cap sealed; 8 m exclusion zone clear of cement and waste	Visual inspection of headwork and exclusion zone	Weekly	Site Supervisor
Soakaway-borehole separation	Minimum 15 m confirmed before soakaway excavation	Measured distance recorded in logbook	Once before soakaway excavation	Proponent
OHS: elevated work	Hard hats worn; scaffolding inspected; south face exclusion zone	Physical check before elevated work each day	Daily when applicable	Site Supervisor
OHS: roofing	Min. 2 on roof; supervisor on site; south slope edge guard in place	Physical observation supervisor present	Continuous during roofing	Site Supervisor (on site)
Solid waste	No loose waste in compound overnight; container not overflowing	Compound walk-through; container check	Daily	Site Supervisor / All workers
Community relations - bungalow	No complaint unresolved for more than 24 hours	Grievance logbook; fortnightly proponent visit	Fortnightly visit; daily log check	Proponent

Delivery road condition	No vehicle damage to Smooth Diamond Crescent unrepaired by end of day	Visual road inspection after each delivery	After each delivery	Site Supervisor
Operational: waste collection	Licensed collector twice weekly	Collection records	Monthly check	Landlord / Estate Manager
Operational: south fence drainage	No drainage toward bungalow compound	Monthly inspection of south compound drainage paths	Monthly; after heavy rain	Landlord
Operational: septic tank	No odour; no slow drainage; desludging on schedule	Annual inspection; desludging log	Annual; desludge every 2 years	Landlord
Operational: building and drainage maintenance	No outstanding structural or drainage defects beyond one month	Annual inspection report	Annual	Landlord

CHAPTER FIVE

IMPLEMENTATION ARRANGEMENTS

5.1 Introduction

This chapter sets out who is responsible for each EMP obligation, how complaints from the bungalow occupants and other neighbours are handled, what steps to take in an emergency, and when each key environmental management activity must be completed. The arrangements are proportionate to a manual residential construction project of this scale and are designed to be followed without specialist environmental staff.

5.2 Institutional Roles and Responsibilities

Table 5.1: Institutional Roles and Responsibilities

Party	Responsibilities Under This EMP
Mr. Chimasi Paul Amaechi Obasi (Proponent and Landlord)	Overall legal accountability for the environmental performance of this project throughout construction and during the operational phase. Specific duties during construction: submit this EMP to the Anambra State Ministry of Environment before mobilisation; register in the EIA Public Registry; obtain Awka North LGA building approval; obtain ANSEWCCA drainage connection approval before the catchment pit overflow pipe is installed; personally notify the bungalow occupants in person at least fourteen days before the first working day; appoint and brief the site supervisor before the first working day; procure all PPE, the first aid kit, the waste container, the site notice board and the generator fuel drum; review the grievance logbook every two weeks and personally respond to any complaint within 24 hours; confirm the soakaway-to-borehole separation by tape measure before soakaway excavation begins; submit the Wastewater Clearance application under Section 216(1) before first occupation; engage the licensed waste collector before first occupation; conduct the annual building inspection during the operational phase.
Site Supervisor / Foreman	Day-to-day management of the construction site in strict accordance with Chapter 4 of this EMP. Specific duties: arrive at the compound by 07:45 each morning and confirm no worker begins before 08:00; conduct a daily morning walk of the compound checking for dust accumulation at the south boundary fence, waste outside bins, borehole headwork seal, catchment pit condition and scaffolding stability; lead a

	five-minute Monday toolbox safety talk covering the week's tasks and their safety requirements; be physically present on site throughout the entire roofing phase - no exceptions; maintain the first aid kit and restock as items are used; record all injuries, generator usage, rain events, complaints and grievances in the site logbook on the day they occur; confirm all workers leave by 17:10 each day; report any matter that cannot be resolved at site level to the proponent the same day.
Construction Workers	Compliance with all site rules in Chapter 4 and in the Worker Code of Conduct at Appendix E. Each worker's specific duties: wear the PPE required for each task; place all waste in designated bins; use only the agreed toilet facility; work only between 08:00 and 17:00 Monday to Saturday; attend the Monday toolbox talk; report any hazard, injury or complaint from the bungalow occupants or any other neighbour to the supervisor immediately; treat the bungalow occupants and all other neighbours with courtesy and respect at all times; never perform any elevated task alone.
Licensed Borehole Driller	Professional responsibility for borehole casing installation, headwork fitting and water quality of the completed supply source. Must provide the proponent with a written record of the borehole depth, casing specification and static water level before leaving the site. All drilling cuttings and wastewater to be managed within the compound without discharge to Smooth Diamond Crescent or to the south boundary area.
Licensed Solar Installer	Professional responsibility for the safe installation of the solar pump, battery bank, inverter, CCTV and security lights. Must seal all roof penetrations for panel mounting brackets; install the battery bank in a ventilated room with circuit breaker protection; route all cables in conduit; brief the estate caretaker on system operation, battery maintenance and emergency procedures before handover; and provide a maintenance contract for annual servicing.
Awka North LGA Environmental Health Department	Regulatory oversight at the local government level. Authority under Parts 9 and 11 of the 2024 Law to conduct unannounced site inspections, receive community complaints and issue enforcement notices. The proponent must cooperate fully with any LGA inspection and make this EMP and all site logbooks available on request.
Anambra State Ministry of Environment	State-level approval and enforcement authority. This EMP is submitted to the Ministry before construction begins. The Ministry receives escalated grievances and environmental compliance reports from the proponent at the mid-construction and completion stages.

5.3 Community Consultation Record

A community consultation meeting was held at the project site at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA in May 2026. The meeting was conducted in compliance with Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024, and with World Bank ESS10 principles.

Table 5.2: Community Consultation Meeting Record

Date of Meeting	May 5, 2026
Venue	Project site, No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA
Participants	5 participants but at different times.
Groups Represented	Occupants of the south boundary bungalow; occupants of the one-storey building across Smooth Diamond Crescent to the south-west; other identified Peace Estate residents and stakeholders
Languages Used	Igbo and English
Convened by	Stellovate Limited on behalf of Mr. Chimasi Paul Amaechi Obasi

5.3.1 Concerns Raised and Proponent's Response

Table 5.3: Consultation Concerns and Responses

Concern Raised	Proponent's Commitment	Where Addressed in This EMP
Cement dust and general construction dust settling on the bungalow at the south boundary, dirtying the compound and affecting household members with respiratory sensitivity	Agreed to position the mixing board on the north side of the compound, wet the mixing area before work begins each day during the dry season, use cutting water on blocks and ensure workers wear dust masks throughout cement handling	Section 4.4.1: mixing board positioned north of compound; twice-daily watering of south compound area; dust masks mandatory; harmattan-specific protocol
Construction noise before 08:00 in the morning and after 17:00 in the evening, and specifically any work on Sundays when the bungalow household expects rest	Committed that all construction work and generator use will be strictly limited to 08:00 to 17:00, Monday to Saturday, with no exceptions and no work on Sundays or public holidays	Section 4.4.2: 08:00 to 17:00 limit; no Sunday work; supervisor at gate by 07:45; generator use capped at same hours

Surface water draining from the construction site toward the south boundary during heavy rain, potentially flooding the bungalow compound or eroding the shared fence line	Committed to excavating and commissioning the stormwater catchment pit before any significant rainfall on a disturbed compound surface, and to grading the compound so all flow is directed toward the pit and not toward the south boundary fence	Section 4.4.3: catchment pit as first-priority construction activity; daily grading of compound surface; post-rain boundary walk; overflow pipe to road drain
Damage to Smooth Diamond Crescent by delivery vehicles, worsening the existing waterlogging and making the road impassable after rain	Committed to scheduling all deliveries only when the road surface is dry and firm; never within 24 hours of rain; to repairing any ruts or damage caused by delivery vehicles before the end of the working day; and to keeping a road repair kit on site	Section 4.3 pre-construction: road condition checks before delivery; repair kit on site. Section 4.4.7: delivery management on Smooth Diamond Crescent
Waste from the construction site blowing into the bungalow compound over the shared south fence, particularly cement bags on windy days	Committed to collecting empty cement bags immediately after each use and never leaving bags or loose packaging in the south half of the compound; securing all loose waste before end of each working day; not storing any loose materials within five metres of the south boundary fence	Section 4.4.4: cement bags collected immediately; five-metre south fence clearance; all waste in bins before workers leave
The long-term management of the compound once it is occupied, specifically whether tenants will create noise or waste nuisance for the bungalow occupants	Committed to including quiet hours (22:00 to 06:00), tenant waste rules and a 24-hour response to any neighbour complaint in all tenancy agreements, and to maintaining the grievance mechanism throughout the operational phase	Section 4.5: quiet hours; waste rules in tenancy agreements; 24-hour complaint response; Section 5.4: operational grievance mechanism maintained

5.3.2 Community Verdict

At the close of each visit, all stakeholders confirmed their support for the project and expressed no objection to the development proceeding. The bungalow occupants specifically confirmed that the proponent's commitments on dust management, drainage, working hours, road condition and operational compound management had addressed their concerns to their satisfaction. The signed attendance register is held by the proponent and reproduced at Appendix B.

5.4 Grievance Redress Mechanism

5.4.1 How to Raise a Concern

A site notice board will be placed at the compound gate before the first working day. It will display in large print the name and telephone number of Mr. Chimasi Paul Amaechi Obasi and the name and number of the site supervisor, together with the words: 'If you have a concern about this construction project, please call or speak to us directly.' Any person may raise a concern by calling or texting the numbers on the notice board; speaking to the site supervisor at the compound gate during working hours; leaving a written note at the gate; or speaking directly to any worker and asking to be connected to the supervisor. Anonymous concerns are accepted and given the same priority as named ones.

Table 5.4: Grievance Redress Step-by-Step Procedure

Step	Action	Maximum Timeframe
Step 1	Site supervisor receives the concern and records it in the grievance logbook with the date, nature of concern and complainant's details (if provided). If the issue can be resolved immediately such as a dust or noise concern the supervisor acts on the same day before leaving the site.	Same day as concern received
Step 2	Supervisor reports the concern to the proponent by phone or in person.	Within 24 hours of receipt
Step 3	Proponent contacts the complainant directly, if identifiable, to acknowledge the concern and explain the action being taken. For the bungalow occupants, this contact must always be in person, not only by phone.	Within 24 hours of Step 2

Step 4	Concern resolved at site level. Resolution recorded in the grievance logbook. Complainant notified of resolution if available.	Within 5 working days of receipt
Step 5	If unresolved within 5 working days, proponent refers to Awka North LGA Environmental Health Department and informs the complainant.	By end of Day 5
Step 6	If unresolved after 10 additional working days following LGA referral, proponent refers to Anambra State Ministry of Environment.	By end of Day 15

5.5 Emergency Response Procedures

Emergency contact numbers to be posted on the site notice board before the first working day: Proponent Mr. Chimasi Paul Amaechi Obasi, Site Supervisor, Nearest Health Facility, Anambra State Fire Service, Nearest Police Station.

Table 5.5: Emergency Response Procedures

Emergency Type	Immediate Actions	Follow-up Actions
Worker fall from first or second floor level or from roof	Call out to all workers. Do not move the fallen worker if spinal or neck injury is possible. Assign one calm worker to stay with the person and provide reassurance while keeping them still. Call the proponent and the nearest health facility immediately. Clear all other workers from the immediate area. Call emergency services if the worker is unconscious or cannot be moved safely.	Transport to the health facility accompanied by one colleague. Record in the first aid log before end of day. Halt all elevated work. Notify the proponent within one hour. Re-inspect all scaffolding and platforms before elevated work resumes. If the fall resulted in injury to anyone in the bungalow compound, attend the bungalow immediately, offer assistance and document the incident fully.
Roofing sheet or tool falling toward the south boundary bungalow	Stop all roof work immediately. Shout a warning to anyone in the bungalow compound. Check whether anyone has been struck or whether any property in the bungalow has been damaged. Call the proponent immediately.	Visit the bungalow occupants in person within the hour. Apologise, assess any damage and commit to making it good. Record the full incident. Do not resume south slope roofing until the edge guard plank has been inspected and confirmed in

		place. Brief all workers on the incident at the next toolbox talk.
Worker cement burn: skin or eye contact	Skin contact: wash immediately with clean water for five minutes minimum. Eye contact: flush with clean water for fifteen minutes continuously without stopping. Do not allow the worker to rub the eye. Call the proponent and arrange transport to the health facility immediately if eye is affected. Eye wash water is available at all times within two metres of the mixing area.	Record in the first aid log before end of day. Restock eye wash supply immediately if it was used. Brief all workers on proper PPE use at the Monday toolbox talk. Ensure gloves, goggles and dust mask are worn by all workers at the next mixing session.
Generator fuel spillage near borehole	Switch the generator off immediately. Do not allow any spark or open flame near the spill. Cover the spill with dry sand from the stockpile to absorb the fuel. Remove the contaminated sand into a sealed drum. Do not allow the spill to enter the eight-metre exclusion zone around the borehole headwork.	Dispose of contaminated sand in a sealed drum through a licensed hazardous waste collector. Inspect the borehole headwork seal and confirm no fuel has entered the casing. Record in the incident log. Review the generator refuelling procedure with all workers at the next toolbox talk.
Drainage overflow toward south boundary bungalow during heavy rain	Stop all open work in the compound. Check the catchment pit inlet screen immediately — clear any blockage. Grade the compound surface by hand to direct water away from the south boundary fence while the rain is still manageable. Do not allow workers to continue working in standing water.	After the rain subsides, inspect and clear the catchment pit and all drainage paths. Repair any erosion channels. If any water reached the bungalow compound, attend the bungalow in person the same day to check for any damage and confirm corrective action taken. Record the incident and the corrective measures.
Fire from cooking, waste burning or generator or solar electrical fault	Evacuate all workers from the compound immediately via the gate. Use sand or the dry-powder extinguisher for small fires. Do not use water on any electrical fire. If the fire is not controlled within two minutes, call the Anambra State Fire Service and the proponent. Account for all workers and alert the bungalow household to keep clear.	Report to the proponent and record in the incident logbook. Engage a licensed electrician before any electrical system is re-energised. Reinforce no-cooking and no-burning rules at the next toolbox talk. Inspect the solar battery bank if the fire involved the battery room.

5.6 CONCLUSION

This Environmental Management Plan has been prepared in full for the proposed construction of a three-floor, six-flat commercial residential building at No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North Local Government Area, Anambra State, on behalf of Mr. Chimasi Paul Amaechi Obasi.

The defining characteristic of this project is the occupied bungalow sharing the south boundary fence. This immediate receptor has shaped every significant mitigation measure in this report. Dust management, drainage grading, working hours, delivery scheduling, roofing edge protection and the operational quiet hours and complaint response time have all been calibrated specifically for a site with an immediately adjacent occupied residential property. This is a higher standard than an open or agricultural site would require, and it is the appropriate standard for this location.

The project site starts construction in a clean environmental condition. Baseline air quality, noise, groundwater and soil measurements all confirm values well within applicable national and state standards. The groundwater quality in particular is very good and must be maintained through the eight-metre borehole exclusion zone, the designated wash-down area and the minimum fifteen-metre soakaway separation.

The pre-existing full perimeter fence is an asset that distinguishes this project from comparable sites. It provides immediate dust containment, access control and material security from the first working day. The compact 168 square metre free compound space is the main physical constraint: waste management, stockpile organisation, drainage grading and the catchment pit commissioning timeline all require more discipline than on a larger plot, and this report treats each one with the corresponding priority.

The community consultation held in May 2026 produced a clear positive outcome. The bungalow occupants and the other neighbours confirmed their support for the project and expressed satisfaction with the proponent's specific commitments on dust, drainage, noise, road condition and operational management. The proponent's commitment to a fortnightly personal visit to the bungalow household throughout construction is the most important single implementation obligation in this EMP.

It is concluded that this project, constructed and managed in accordance with the measures in this EMP, presents no significant or lasting danger to the environment or to the surrounding community

of Peace Estate, Otoko, Isu Aniocha. The report is submitted to the Anambra State Ministry of Environment and to Awka North Local Government Area in support of the proponent's application for development approval.

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APPENDICES

Appendix A: Regulatory Compliance Cross-Reference

Table A.1: Regulatory Compliance Cross-Reference

Environmental Component	Standard / Limit	Regulatory Source	EMP Compliance Action
Ambient PM10	116 ug/m ³	NESREA	Mixing board on north side; south compound watered twice daily; dust masks for cement handlers; harmattan protocol
Ambient PM2.5	25 ug/m ³	NESREA / WHO	Wet mixing board; wind-aware mixing positioning; workers wear N95 dust masks
Daytime noise	50 to 60 dBA	NESREA Noise Standard	Work 08:00 to 17:00 Mon to Sat only; generator same hours; no Sunday work; supervisor check at 08:00 and 17:00 daily
Drinking water: E. coli	0 cfu/100 mL	WHO / NSDWQ	Borehole headwork sealed and elevated; 8 m exclusion zone; designated wash-down away from borehole
Soakaway-borehole separation	15 m minimum	Engineering standard / NESREA	Measured by tape on site and confirmed in logbook before soakaway excavation begins
Wastewater clearance	Required before first occupation	Anambra State Env. Law 2024, Section 216(1)	Application submitted to Wastewater Management Office before first tenant occupies
ANSEWCCA drainage approval	Required before overflow pipe connection	Anambra State Env. Law 2024, Part 2	Approval obtained before catchment pit overflow pipe installed
Public Registry registration	Required before construction	Anambra State Env. Law 2024, Part 8	Registered; public comment period observed before site work begins

Landscaping and setback	3 m setback; perimeter beautification	Anambra State Env. Law 2024, Sections 79 and 80	Landscaping completed before first occupation; 3 m setback maintained
Solid waste disposal	Licensed collector; no burning	Anambra State Env. Law 2024, Part 10; Sections 136 and 137; NESREA Regs 2009	ASWAMA-licensed collector twice weekly from first occupation; no burning at any stage
Community notification and consultation	Required before commencement	Anambra State Env. Law 2024, Section 315	Consultation held May 2026; bungalow occupants personally notified 14 days before start; register at Appendix B
Spent battery and e-waste disposal	Licensed recycler required	National Env. (Electrical/Electronic Sector) Regulations 2011	Spent solar batteries returned to installer or licensed recycler; not placed in general waste

Appendix B: Community Consultation Questionnaire

Date: May 5, 2026 | Venue: Project site, No. 6, Smooth Diamond Crescent, Peace Estate, Otoko, Isu Aniocha, Awka North LGA

Convened by: **Stellovate Limited** on behalf of Mr. Chimas Paul Amaechi Obasi

Purpose: To inform immediately affected neighbours of the proposed development; to gather and record their concerns; and to confirm their position on the project in compliance with Section 315 of the Anambra State Environmental Management, Protection and Administration Law, 2024.

Community Consultation Questionnaire

SOCIO-ECONOMIC BASELINE QUESTIONNAIRE

Proposed Residential Building, No. 6 Smooth Diamond Crescent, Peace Estate, Otoko, Awka North LGA

Date: _____

Community/Street: _____

Respondent category:

☐ Resident ☐ Business owner/Trader ☐ Other

A. Respondent Profile

1. Age range: ☐ Under 18 ☐ 18-35 ☐ 36-55 ☐ Above 55 2. Sex: ☐ Male ☐ Female

3. How long have you lived or worked in this area?

☐ Less than 1 year ☐ 1-5 years ☐ Above 5 years

4. Main occupation/livelihood: _____ 5. Household size: _____

B. Housing, Services and Infrastructure

6. Premises: ☐ Owned ☐ Rented

7. Access to public electricity supply? ☐ Yes, fairly steady ☐ Yes, but unreliable ☐ No

8. Main source of water:

☐ Borehole ☐ Well ☐ Public supply ☐ Other

9. How do you mainly get rid of household waste?

☐ Burning ☐ Burying/dumping on own land ☐ Collected by waste service ☐ Other

10. Is the road to your house/business easy to use all year round? ☐ Yes ☐ No, hard in rainy season

11. Main way you get around locally:

☐ Walking ☐ Motorcycle/tricycle (okada/keke) ☐ Private car ☐ Public transport

C. Views on the Project

12. Are you aware of the proposed project? ☐ Yes ☐ No

13. Benefits, if any, expected from this project: _____

14. Concerns, if any, about this project: _____

15. Your position: ☐ Support ☐ Object ☐ Undecided

Thank you for your time.

Community verdict: All participants expressed support for the project and raised no objection to it proceeding, subject to the proponent's specific commitments on dust, drainage, noise, access road management and operational compound management.

Recorded by: Date:

Consultant signature:

Appendix C: Waste Management Plan

Table C.1: Construction and Operational Waste Management Plan

Waste Category	Phase	Disposal / Reuse Route	Removal Frequency
Block offcuts and concrete rubble	Construction	Reused to compact and level six parking spaces. Excess to Awka North LGA-approved dumpsite.	End of each week; final removal within 14 days of completion
Cement bags and material packaging	Construction	Empty bags sold to local traders immediately. Remaining packaging in covered waste bin daily.	Daily collection; weekly bin emptying
Water sachets and food waste	Construction	Covered food bin at workers' rest area. All into bin before workers leave. Not left overnight.	Daily
Scrap steel: rod offcuts, wire, nails	Construction	Dedicated steel bin; collected from ground end of each day. Sold to scrap dealer weekly.	Daily collection from ground; weekly sale
Spent generator oil and oil-soaked materials	Construction	Sealed drum away from borehole. Removed by licensed waste oil collector.	As accumulated; quarterly disposal
Plastering and tile cutting waste	Construction	Designated pile. Removed to LGA dumpsite bi-weekly during finishing phase.	Bi-weekly
Domestic household waste - 6 flats	Operational	ASWAMA-licensed collector via covered bin at compound frontage on Smooth Diamond Crescent.	Minimum twice weekly
Waste vehicle oil and fluids	Operational	Covered drum at parking area. Removed by licensed waste oil handler quarterly.	As accumulated; quarterly
Spent solar batteries at end of life	Operational	Returned to solar installer or licensed battery recycler only. Never in general waste bin.	At end of battery service life

Appendix D: Occupational Health and Safety Plan

D1. Personal Protective Equipment Requirements

Table D.1: Personal Protective Equipment Requirements by Task

Task	Minimum PPE Required	Who Provides
Cement bag handling and mortar mixing	N95 dust mask, safety goggles, rubber gloves	Proponent in place before first mixing day
Block laying at first and second floor levels	Hard hat, safety footwear with toe cap	Proponent
Roofing at second-floor roof level	Hard hat, rubber-soled non-slip footwear, work gloves; no loose clothing	Proponent mandatory for every person on roof
Foundation, soakaway and catchment pit excavation	Safety footwear, work gloves	Proponent
General site work at ground level	Sturdy closed footwear toe-cap boots preferred	Each worker; proponent provides if worker cannot
Tile cutting and chiselling	Safety goggles, work gloves	Proponent
Generator fuelling	Rubber gloves; refuel only when cool and switched off	Site supervisor enforces

Appendix D: Building Site Plan and Elevation

