

NATIONAL PROPERTY & RENTAL SYSTEM

# Developer & User Guide

A Step-by-Step Guide with Interface Examples for New Developers  
Building Ghana's National Property Registration & Tax Collection Platform

Version 2.0 · April 2026 · Ministry of Finance, Ghana  
Ghana Revenue Authority · All 261 MMDAs

■ ■ Property Tax

■ Rental Income

✈ ■ Airbnb/Tourism

■ Field Agents

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# Platform Overview & Architecture

What NPRS is, how it is structured, and who uses it

01

## What is NPRS?

The National Property and Rental System (NPRS) is a government-operated digital platform that registers every property in Ghana, computes and collects property rates for all 261 Metropolitan, Municipal and District Assemblies (MMDAs), captures rental income tax for the Ghana Revenue Authority (GRA), and tracks short-let/Airbnb listings for tourism levy and income tax collection. Think of NPRS as the central nervous system connecting every property in Ghana to the revenue agencies that depend on it.

## Who Uses the Platform?

User Type	What They Do on NPRS	Access Level
Ghanaian Citizen / Property Owner	Register property, pay rates, view billing history	Self-service portal, mobile app, USSD
Landlord	Register tenancy, receive WHT deduction statements	Self-service portal + SMS alerts
Airbnb / Short-let Operator	Register listing, view tax obligations, pay tourism levy	Operator dashboard
Field Agent (Level 1-2)	Physically register properties on behalf of citizens	Field agent mobile app (offline capable)
MMDA Revenue Officer	View property roll, track arrears, manage enforcement	MMDA admin dashboard
GRA Tax Officer	View rental WHT, tourism levy, short-let income tax	GRA analytics portal
Ministry of Finance	National revenue reporting, policy dashboards	Ministry executive dashboard

## System Architecture Overview

NPRS is built as a microservice architecture with 5 layers. Each layer has a specific responsibility and communicates with adjacent layers through well-defined APIs. New developers must understand this layered model before working on any individual service.

Layer	Components	Technology
<b>CHANNEL LAYER</b> (How users access NPRS)	Web Portal, Mobile App, USSD *770#, Field Agent App, Admin Dashboards	Next.js 14, React Native, Africa's Talking USSD
<b>API GATEWAY</b> (Security & routing)	OAuth2 Auth, Rate Limiting, Load Balancing, Audit Logging, API Versioning	Kong API Gateway, JWT + Ghana Card
<b>CORE SERVICES</b> (Business logic)	Property Registry, Identity, Valuation Engine, Tax Calculator, Billing, Rental, Short-let	Node.js 20 + TypeScript, Python 3.12 (valuation)
<b>INTEGRATION LAYER</b> (External agencies)	NIA (Ghana Card), GRA TIN, Lands Commission, Ghana Tourism Authority, Mobile Money	REST APIs, ISO 20022 payment messages
<b>DATA LAYER</b> (Storage)	PostgreSQL + PostGIS (properties/spatial), Kafka (events), Redis (cache)	PostgreSQL 16, ClickHouse (analytics), Redis 7

**LEGAL MANDATE**

NPRS operates under: Local Governance Act 2016 (Act 936) — property rates; Income Tax Act 2015 (Act 896) — rental and short-let income; Tourism Act 2011 (Act 817) — tourism levy; Data Protection Act 2012 (Act 843) — all citizen data; Electronic Transactions Act 2008 (Act 772) — digital registration validity.

# Citizen Property Registration

Step-by-step guide with interface screenshots for registering a property

# 02

## Overview

Any property owner in Ghana — individual or corporate — must register their property on NPRS. The registration process is broken into 5 progressive steps and can be completed on web, mobile app, or through a licensed field agent. Registration data is saved at every step so citizens can stop and continue later. Average completion time is 12 minutes online, or 20 minutes with a field agent.

## The 5 Registration Steps

**1**

### Identity Verification

Validate your Ghana Card number and TIN against NIA and GRA databases in real time.

**2**

### Property Location

Enter or scan your Ghana Post digital address / GPS coordinates. The system auto-maps the MMDA boundary.

**3**

### Property Details

Describe the property type, use, floor area, construction year, and estimated rooms.

**4**

### Ownership Documents

Upload at least one proof of ownership (title deed, site plan, lease, or court order).

**5**

### Review & Submit

Confirm all details, accept the Privacy Notice, and receive your permanent NPRS Property ID instantly.

## STEP 1 — Identity Verification

The citizen opens the NPRS web portal or mobile app and enters their Ghana Card number. The system immediately calls the NIA API to verify the card and returns the registered name. The TIN is then validated with GRA. Both checks happen in under 2 seconds. The citizen does not need to type their name — it is auto-filled and locked.

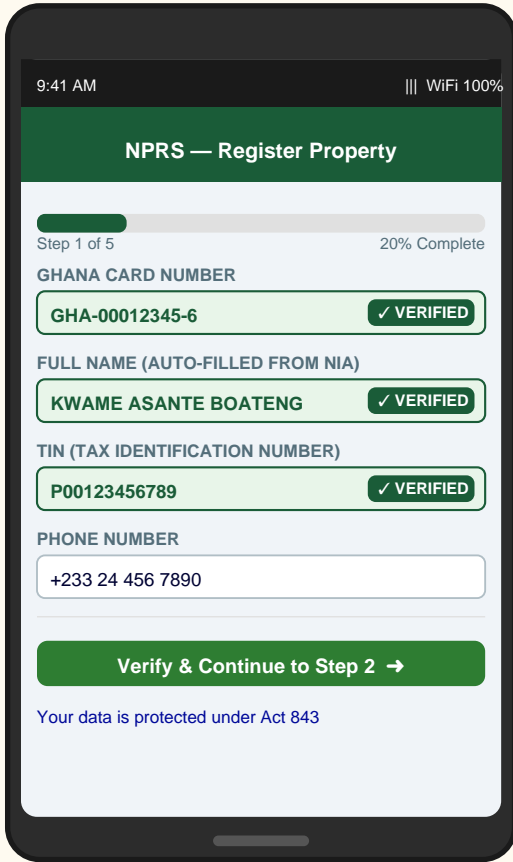


Fig. 2.1a — Mobile App: Step 1 Identity Verification

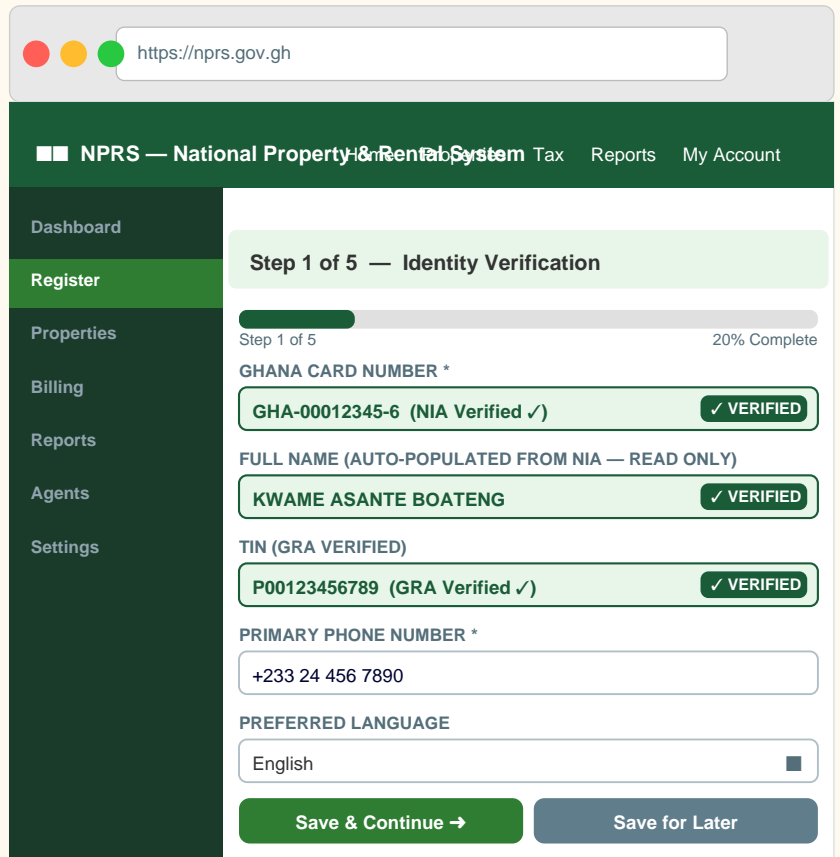


Fig. 2.1b — Web Portal: Step 1 Identity Verification

### DEVELOPER NOTE — NIA API INTEGRATION

The identity-service calls NIA API endpoint POST /v1/verify. You must sign an MOU with the National Identification Authority before API access is granted. Ghana Card numbers are stored as HMAC-SHA256 tokens — never the raw number. Response includes: verified\_name, date\_of\_birth, region\_of\_birth, and photo\_hash for biometric cross-check.

## STEP 2 — Property Location

The citizen enters their Ghana Post digital address (e.g. GE-491-3498) or allows the app to capture GPS coordinates automatically. The system plots the property on a map and determines which MMDA it belongs to using PostGIS boundary data. The citizen confirms the pin location is correct before proceeding.

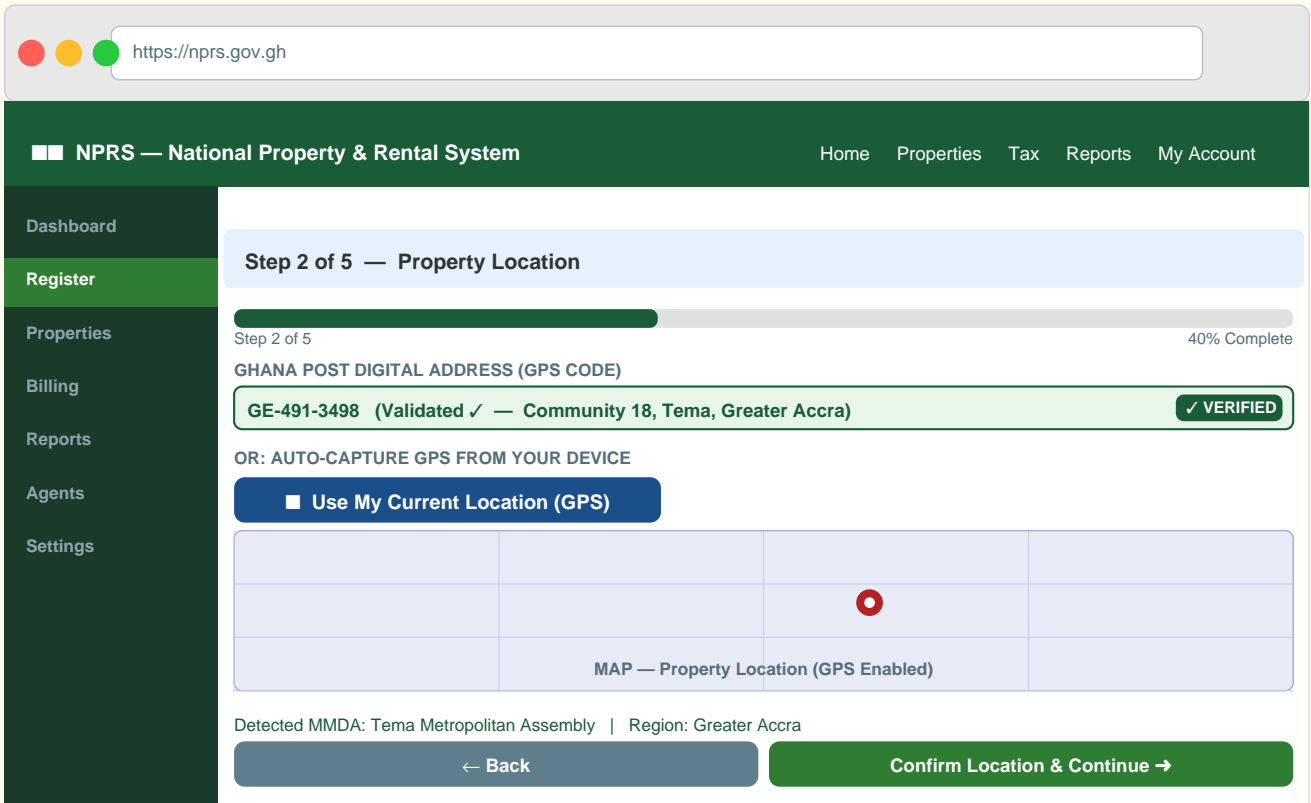


Fig. 2.2 — Web Portal: Step 2 Property Location with GPS Map

## STEP 3 — Property Details

The citizen provides property characteristics. Floor area can be an estimate — it will be verified by a valuation officer or field agent as part of the annual valuation cycle. The system auto-suggests an Annual Rental Value estimate based on the property type, location, and size, so the citizen can see a rough tax estimate before submitting.

The screenshot shows a web browser window with the URL <https://nprs.gov.gh>. The page title is "NPRS — National Property & Rental System". The navigation menu includes "Home", "Properties", "Tax", "Reports", and "My Account". The left sidebar contains "Dashboard", "Register", "Properties", "Billing", "Reports", "Agents", and "Settings". The main content area is titled "Step 3 of 5 — Property Details" and shows a progress bar at "Step 3 of 5" which is 60% complete. The form fields are as follows:

- PROPERTY TYPE:** Residential
- CURRENT USE:** Owner-Occupied (I live here)
- APPROXIMATE FLOOR AREA (SQUARE METRES):** 120 m<sup>2</sup> (3-bedroom detached)
- APPROXIMATE YEAR BUILT:** 2008
- NUMBER OF ROOMS (EXCLUDING BATHROOMS):** 4 rooms

At the bottom of the form, it displays: **Estimated Annual Rental Value: GH₵ 14,400** → **Estimated Property Rate: GH₵ 86.40/year**. Navigation buttons include "← Back" and "Save Details & Continue →".

Fig. 2.3 — Step 3: Property Details with live ARV estimate

### ARV ESTIMATION LOGIC

The valuation-engine service uses a gradient-boosted ML model trained on 40,000+ valuation records from Lands Valuation Division. Inputs: property type, use, floor\_area, year\_built, MMDA zone, GPS-derived proximity to amenities. Output: estimated\_arv ± 15%. This estimate is provisional — a qualified valuation officer confirms within 60 days.

## STEP 4 — Ownership Documents

The citizen must upload at least one document proving they own or have rights over the property. The document-service accepts PDF, JPG, and PNG files up to 10MB. Documents are scanned by OCR within 24 hours and cross-referenced with Lands Commission records. The citizen can submit the form before document review completes — the NPRS-ID is issued immediately, but marked "Pending Full Verification" until documents are cleared.

Document Type	Accepted By	Verification Time
Land Title Certificate (Leasehold/Freehold)	Lands Commission	2–5 working days
Site Plan (stamped by Survey Dept.)	Lands Commission / Survey Dept.	3–7 working days
Indenture / Deed of Assignment	Lands Commission	3–7 working days
Court Order confirming ownership	NPRS Legal Team	5–10 working days
Lease Agreement (for tenanted properties)	NPRS + GRA	1–2 working days
Voter ID + Field Agent physical verification	Field Agent + MMDA	1–3 working days

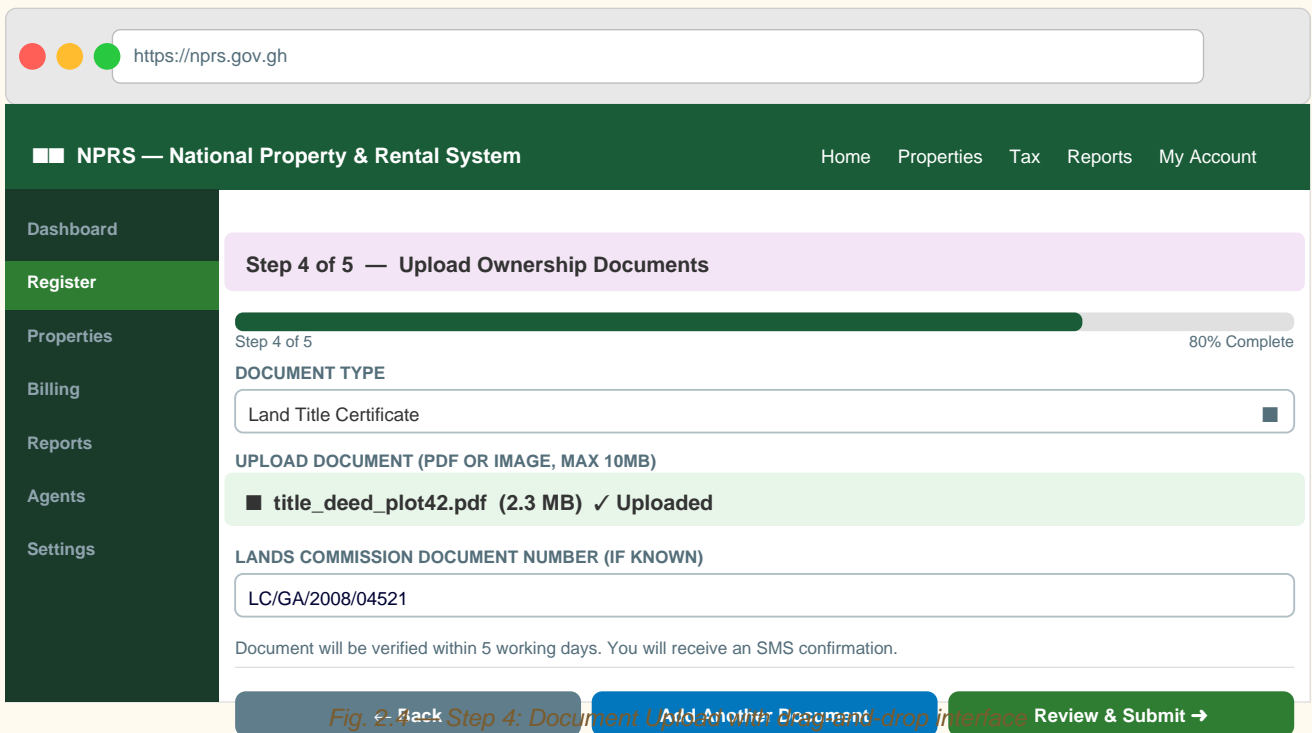


Fig. 2-4 Back Step 4: Document Upload Add Another Document Review & Submit ->

## STEP 5 — NPRS Property ID Issued

Immediately upon submission the system assigns a permanent NPRS Property ID. This ID never changes — even if ownership is transferred. The citizen receives an SMS with their ID and a confirmation email. The property is now visible on the citizen's NPRS dashboard and in the MMDA property roll. The NPRS-ID is also sent to the nearest MMDA office for physical records.

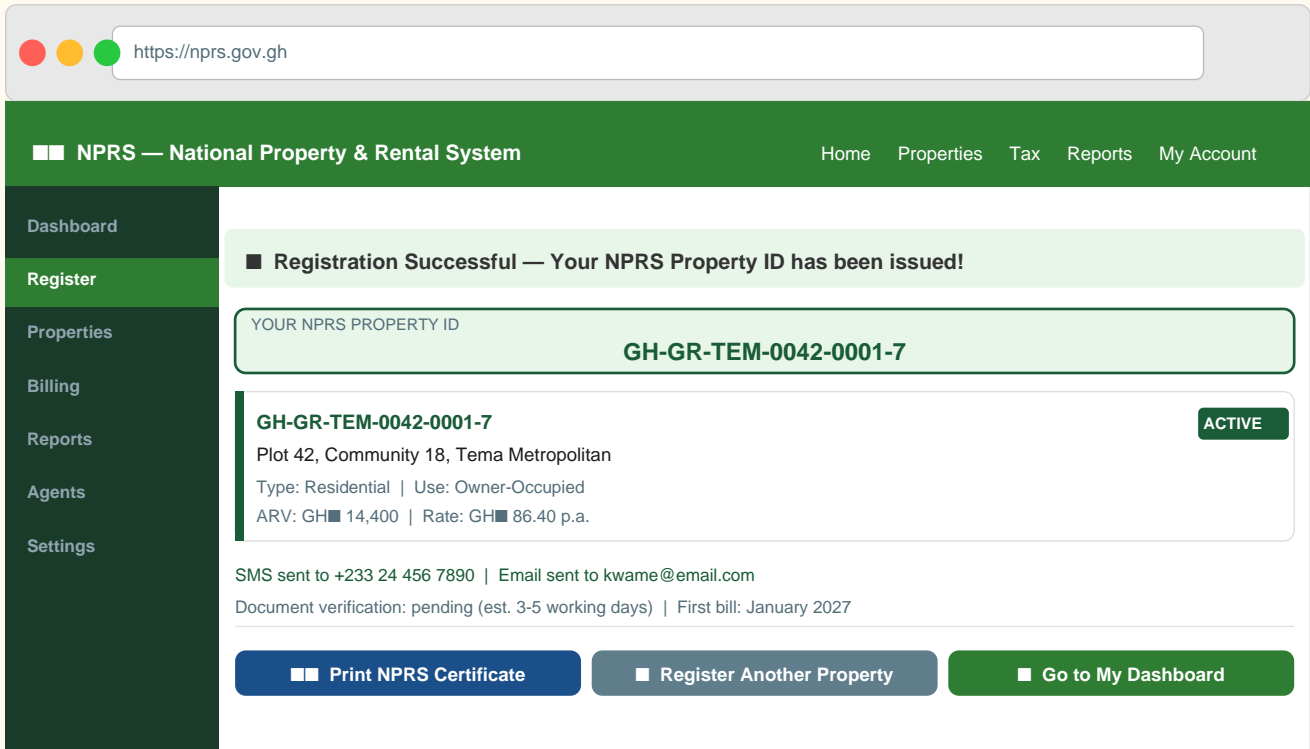


Fig. 2.5 — Step 5: Registration Success screen with NPRS Property ID

### NPRS-ID FORMAT EXPLAINED

GH = Ghana | GR = Greater Accra | TEM = Tema Metropolitan | 0042 = Block number | 0001 = Parcel number | 7 = Luhn check digit. This ID is permanent and unique. The identity-service validates the check digit on every inbound API request that references an NPRS-ID to prevent typos.

# Property Tax Calculation & Billing

How rates are computed, billed, and collected with MMDA disbursement

# 03

## How Property Rates Are Calculated

Property rates in Ghana are based on the Annual Rental Value (ARV) of the property — the amount the property would earn in rent per year if it were rented out on the open market. This is established by the Lands Valuation Division. NPRS applies the formula:  $\text{Property Rate} = \text{ARV} \times \text{Rate Percent} \times \text{Property Type Multiplier} - \text{Any Relief}$ .

### Step-by-Step Calculation Example

Step	Description	Example Value
1. Get ARV	Lands Valuation Division assessed Annual Rental Value	GH■ 14,400
2. MMDA Rate %	Tema Metropolitan Assembly current rate (set by resolution)	0.72% of ARV
3. Type Multiplier	Residential owner-occupied = 1.0 (base rate)	x 1.0
4. Gross Bill	$\text{ARV} \times \text{Rate} \times \text{Multiplier} = 14,400 \times 0.0072 \times 1.0$	GH■ 103.68
5. Apply Relief	Owner is not a pensioner; no relief applies	- GH■ 0.00
6. Net Annual Bill	Final amount owed for the year	GH■ 103.68
7. Quarterly Option	Citizen opts for quarterly instalments (÷4)	GH■ 25.92 / quarter

### Property Rate Multipliers by Type

Property Use	Multiplier	Typical Annual Rate (on GH■14,400 ARV)
Residential — Owner Occupied	1.0x	GH■ 86 – GH■ 173
Residential — Rented Out	1.2x	GH■ 104 – GH■ 207
Commercial (retail, office)	2.5x	GH■ 180 – GH■ 540
Short-let / Airbnb	3.0x (commercial)	GH■ 216 – GH■ 648
Industrial	2.0x	GH■ 144 – GH■ 432
Agricultural (active farming)	0.25x	GH■ 18 – GH■ 54
Vacant Land	1.5x	GH■ 108 – GH■ 324

## Citizen Billing Dashboard

After registration, the citizen logs into the NPRS portal to see their billing dashboard. This shows all properties, current bills, payment history, and an option to pay online via mobile money, bank transfer, or card.

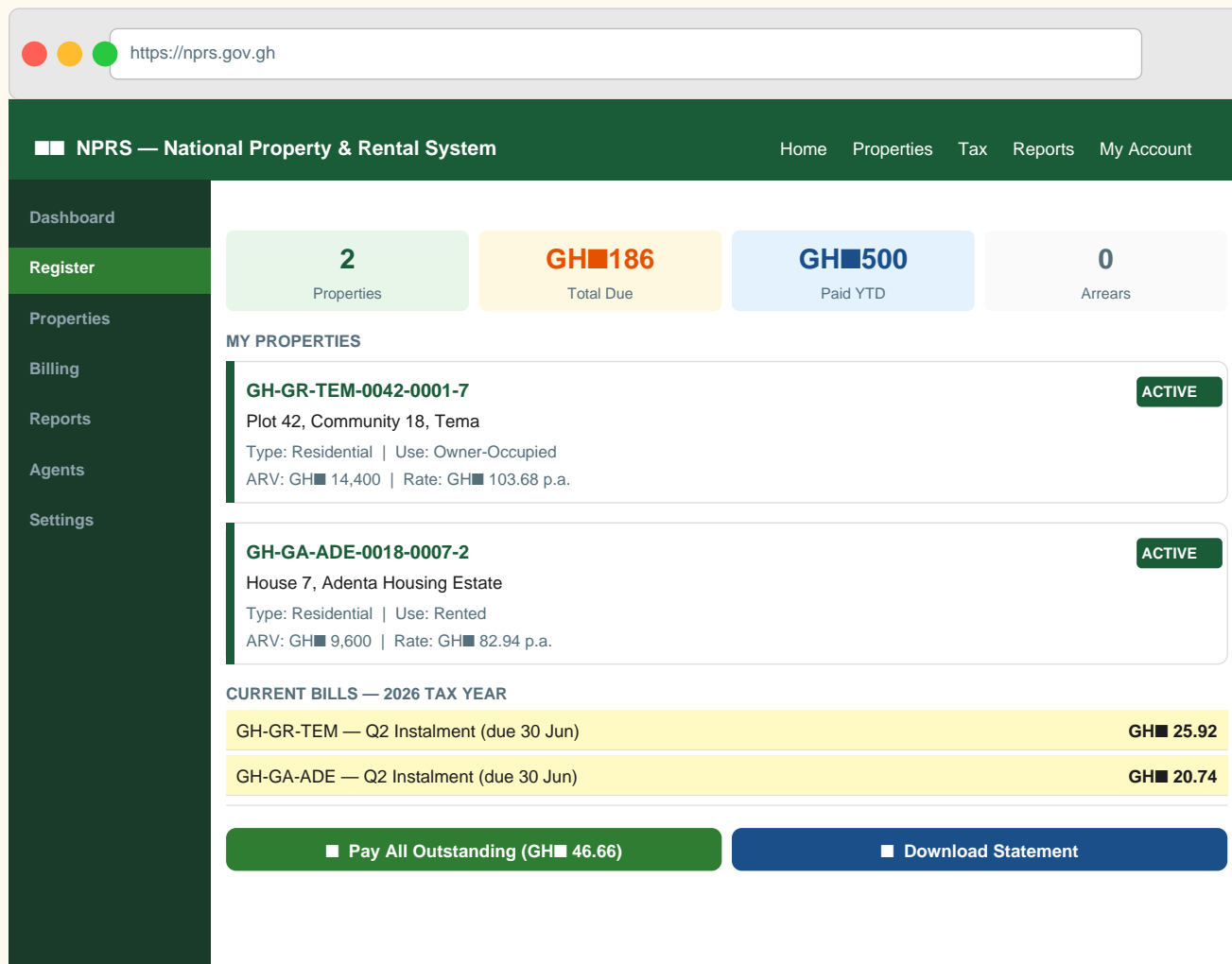


Fig. 3.1 — Citizen Billing Dashboard showing 2 properties and Q2 instalments due

### Mobile Money Payment Flow

When the citizen clicks "Pay", the system redirects to the payment gateway. The citizen selects Mobile Money (MTN MoMo, Vodafone Cash, or AirtelTigo), enters their MoMo number, and approves the prompt on their phone. The payment is confirmed within 15 seconds and a receipt is emailed and SMS-ed.

Step	Action	System Response
1	Click "Pay with Mobile Money"	payment-gateway opens MoMo selection screen
2	Select MTN MoMo; enter +233241234567	System sends MTN payment request (GHIPSS API)
3	Citizen approves MoMo prompt on phone	MTN confirms payment to NPRS webhook in 10s
4	NPRS marks bill as paid	Receipt generated; NPRS-ID invoice number issued
5	SMS: "NPRS: GH₵25.92 received. Ref: NPR-2026-89234"	Email receipt sent; dashboard updated
6	Auto-disbursement runs at midnight	GH₵25.79 sent to Tema Metro escrow; GH₵0.13 to NPRS ops

# Rental Income Tax Collection

How WHT is computed, deducted, and remitted to GRA for rental properties

# 04

## How Rental Tax Works on NPRS

Under the Income Tax Act 2015 (Act 896), rental income is subject to Withholding Tax (WHT). NPRS automatically computes the WHT on every rental payment recorded in the system and remits it to GRA by the 15th of the following month. The landlord receives the net amount after tax deduction and gets a monthly statement showing all deductions made on their behalf.

### WHT Rates at a Glance

Landlord Category	WHT Rate	Example: GH₵3,000/month rent	WHT Amount	Net to Landlord
Individual (Ghanaian resident)	8%	GH₵3,000	GH₵240	GH₵2,760
Individual (Non-resident)	15%	GH₵3,000	GH₵450	GH₵2,550
Company / Corporate	25%*	GH₵3,000	GH₵750*	GH₵2,250*
Religious body (commercial rental)	8%	GH₵3,000	GH₵240	GH₵2,760
Government / SSNIT housing	EXEMPT	GH₵3,000	GH₵0	GH₵3,000

\* Companies file quarterly self-assessment; NPRS imports returns from GRA-ITMS.

## Tenancy Registration & Monthly Payment Interface

Landlords register their tenancy agreements on NPRS. When rent is paid — whether by mobile money, bank transfer, or recorded cash — the rental-service automatically computes and holds the WHT portion in escrow until monthly GRA remittance.

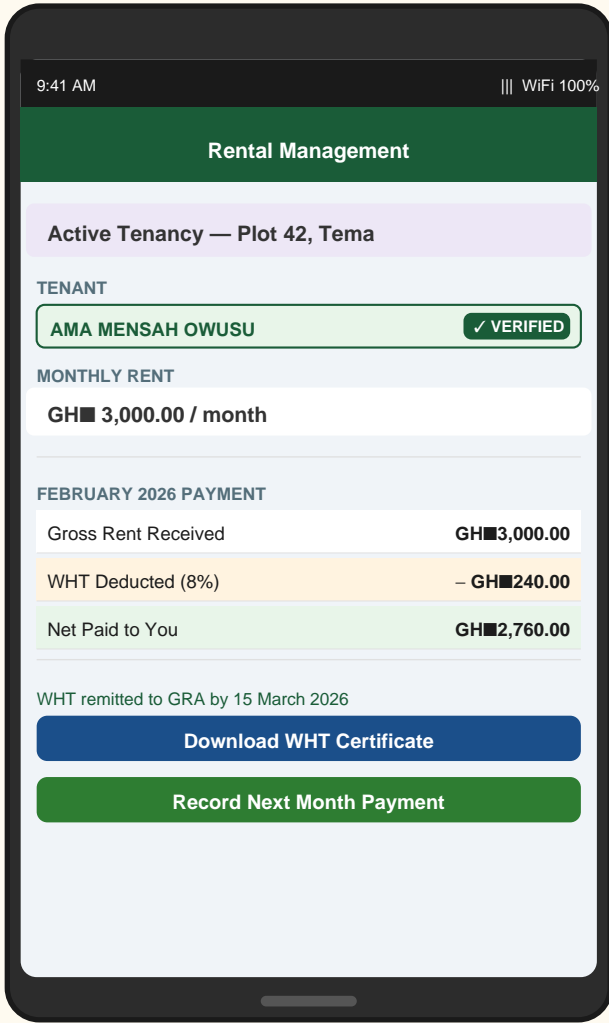


Fig. 4.1a — Mobile: Landlord monthly statement

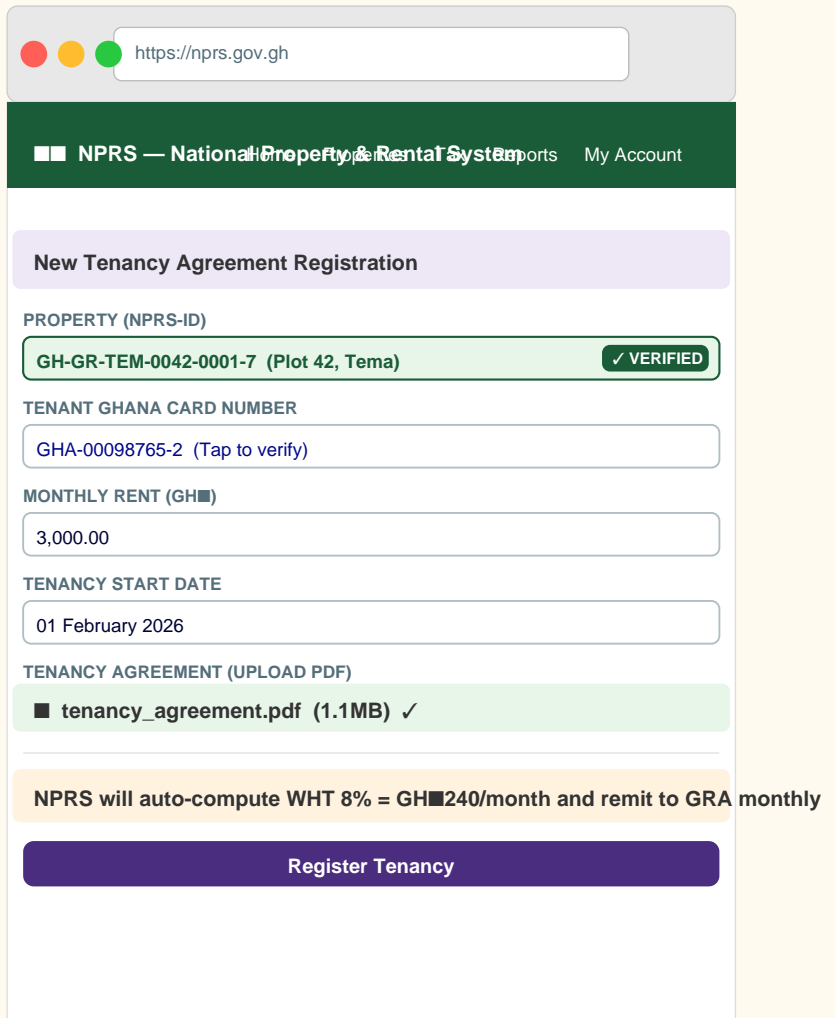


Fig. 4.1b — Web: Register new tenancy agreement

# Airbnb & Tourism Tax

Income tax, tourism levy, and VAT for short-let operators

05

## Three Taxes in One Dashboard

Any property listed on Airbnb, VRBO, Booking.com, or any other short-let platform in Ghana must be registered on NPRS. The operator faces THREE simultaneous tax obligations. NPRS computes and remits all three automatically from booking revenue data fed via API.

Tax	Legal Basis	Rate	Who Receives It
Income Tax on short-let income	Income Tax Act 896, S.96	25% of net profit (company) or progressive rate (individual)	Ghana Revenue Authority
Tourism Levy	Tourism Act 2011 (Act 817)	GH₵2/room/night (residential) or 10% of room revenue (commercial)	Ghana Tourism Authority
VAT / NHIL / GetFund	VAT Act 870 (amended)	16% effective (12.5% VAT + 2.5% NHIL + 1% GetFund)	Ghana Revenue Authority (VAT) / Ghana Revenue Authority (NHIL) / Ghana Revenue Authority (GetFund)

## Short-let Operator Dashboard

After linking their Airbnb account to NPRS, the operator sees a consolidated dashboard showing monthly revenue from all platforms, computed tax obligations, and payment status for each tax type. The VAT threshold tracker alerts the operator when they approach the GH₵200,000 annual revenue threshold.

The screenshot shows the NPRS dashboard interface. At the top, there's a navigation bar with 'Home', 'Properties', 'Tax', 'Reports', and 'My Account'. A sidebar on the left contains menu items: 'Dashboard', 'Register', 'Properties', 'Billing', 'Reports', 'Agents', and 'Settings'. The main content area displays four summary cards: 'Revenue This Month' (GH₵14,200), 'Income Tax (25%)' (GH₵3,550), 'Tourism Levy (10%)' (GH₵1,420), and 'Revenue YTD' (GH₵68,400). Below these is a 'FEBRUARY 2026 — TAX BREAKDOWN' table:

Category	Amount
Airbnb bookings (18 nights)	GH₵ 9,800.00
Direct bookings (local)	GH₵ 4,400.00
<b>Total Gross Revenue</b>	<b>GH₵ 14,200.00</b>
Allowable Expenses (maintenance, cleaning)	- GH₵ 1,200.00
<b>Taxable Net Income</b>	<b>GH₵ 13,000.00</b>
Income Tax Payable (25%)	GH₵ 3,250.00
Tourism Levy (18 nights x GH₵79/night rate)	GH₵ 1,420.00

Below the table, a yellow alert banner states: 'VAT Threshold: GH₵ 68,400 / GH₵ 200,000 (34%) — Approaching threshold, VAT registration required at 80%'. At the bottom, there are three action buttons: 'Pay All Taxes (GH₵ 4,670)', 'File Tax Return', and 'Link Airbnb Account'.

*Fig. 5.1 — Short-let Operator Dashboard: consolidated monthly tax view*

# Field Agent Mobile Workflow

Offline-capable registration on behalf of citizens in the field

# 06

## Why Field Agents Are Essential

Millions of Ghanaian property owners are not digitally connected — they may not have smartphones or internet access. Field agents visit properties physically, register them on behalf of the owner, and capture GPS coordinates and photos. The agent mobile app works fully offline and syncs when connectivity returns.

### Agent App — Step by Step

Step	Agent Action	App Behaviour
1. Authenticate	Agent scans their own Ghana Card + enters 6-digit PIN	Agent identity locked to session; all actions signed by agent ID
2. New Registration	Tap "Register New Property"; app checks offline NIA cache	GPS auto-captured; map shown even offline using cached tiles
3. Scan Owner Ghana Card	Hold NFC-enabled Ghana Card to phone OR scan QR Code	Owner identity verified against offline NIA cache (updated daily)
4. Fill Property Form	Enter property type, use, floor area, year built	Form saved locally every 30 seconds; cannot be deleted
5. Take Photos	App guides agent: façade, meter/address, plot plan	Photos watermarked with GPS, timestamp, agent ID before save
6. Get Owner Signature	Owner signs digital consent on agent screen	Signature biometrically bound to form; stored encrypted
7. Submit / Queue	Tap "Submit"; if online → instant; if offline → queued	Queue visible to agent; auto-syncs when signal returns
8. Commission Credit	After supervisor verification (14 days)	Agent ledger updated; payout to agent MoMo account monthly

## Field Agent App Interface

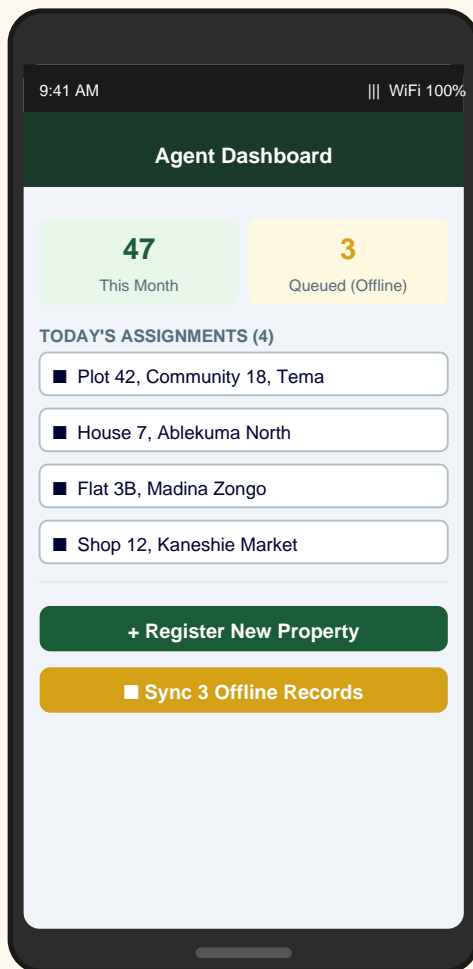


Fig. 6.1a — Dashboard & queue

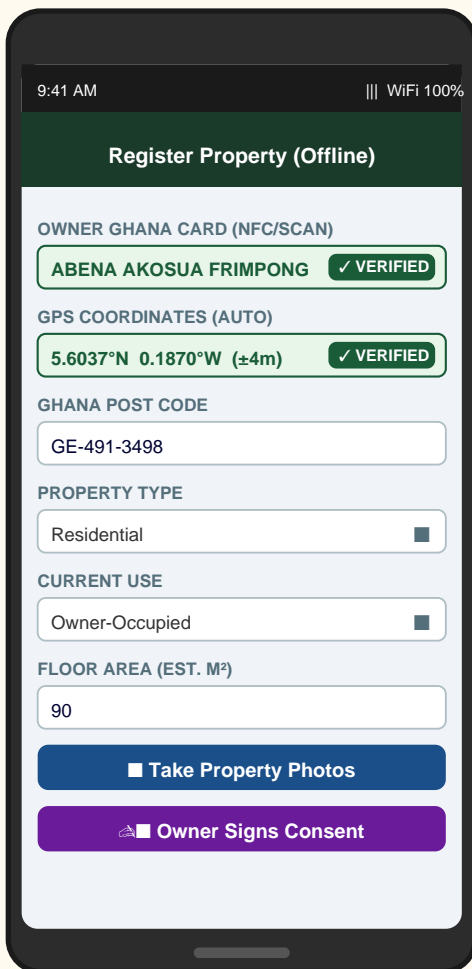


Fig. 6.1b — Offline registration form

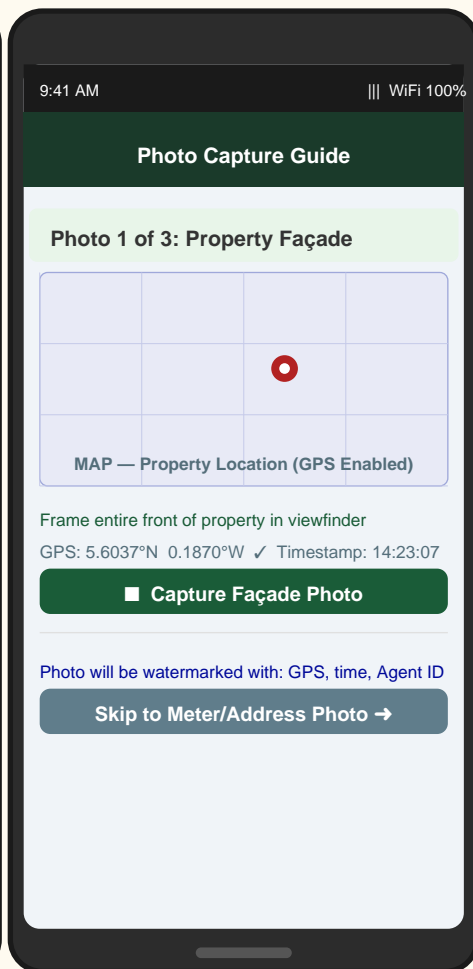


Fig. 6.1c — GPS photo capture guide

**ANTI-FRAUD: AGENT GPS TRAJECTORY CHECK**

The agent-service validates that the agent's GPS location at form submission matches the property GPS within 100 metres. Submissions where the agent was not physically at the location are automatically flagged for supervisor review and commission is withheld until manual verification. GPS history is stored for audit purposes for 7 years.

# MMDA & GRA Dashboard Guide

What revenue officers and assembly staff see on their admin dashboards

07

## MMDA Revenue Officer Dashboard

Each of the 261 MMDAs has its own login to the NPRS admin portal. The MMDA dashboard shows all properties within the assembly boundary, billing status, arrears, collection rate, and enforcement pipeline. Revenue officers can generate demand notices, assign field agents to delinquent properties, and view real-time payment receipts.

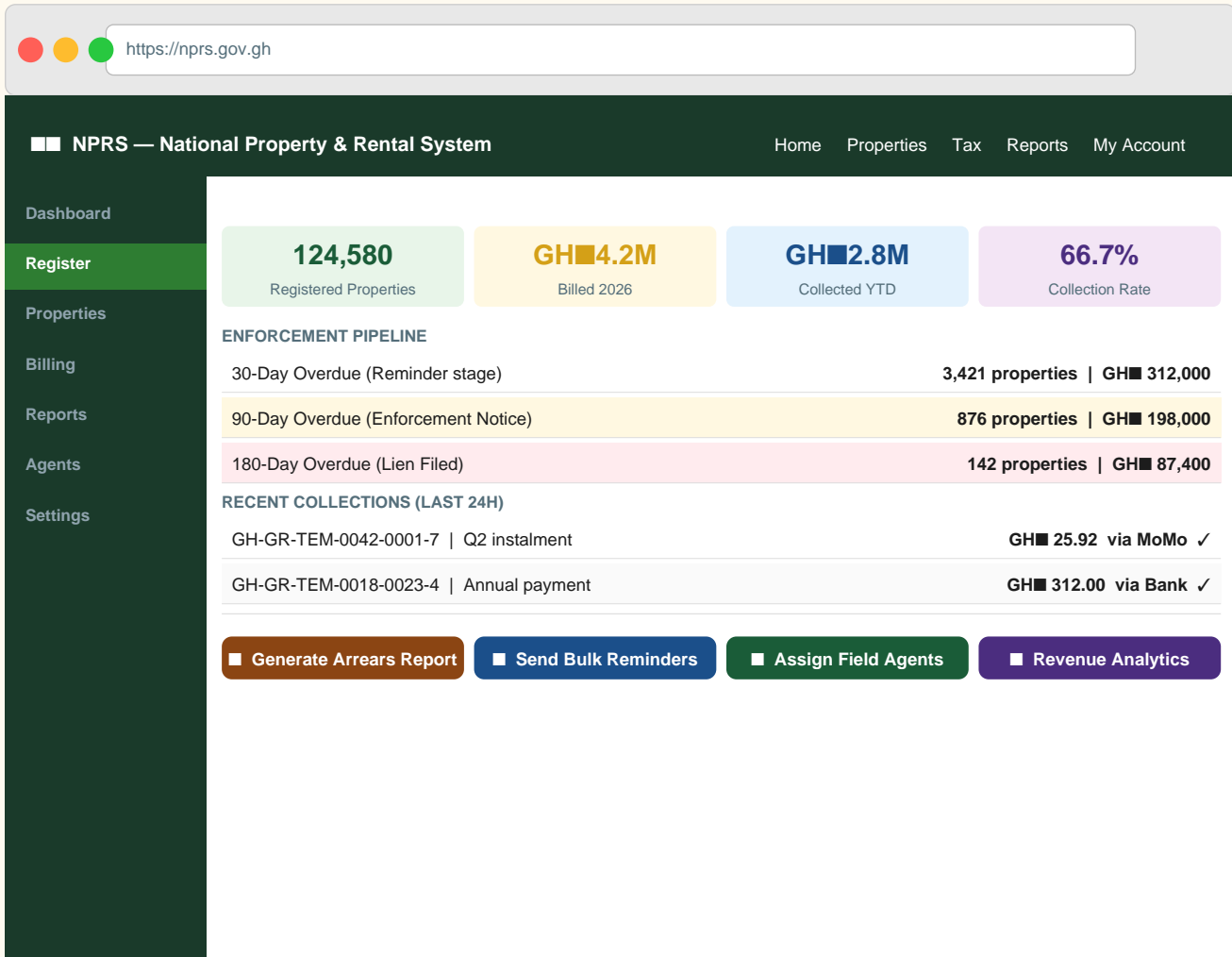


Fig. 7.1 — MMDA Revenue Officer Dashboard: Tema Metropolitan Assembly

## GRA Analytics Dashboard

GRA has read-only access to NPRS data across all MMDAs plus full write access to rental WHT and short-let income tax records. The GRA dashboard shows national revenue breakdowns, delinquency hotspots by region, and Airbnb compliance statistics.

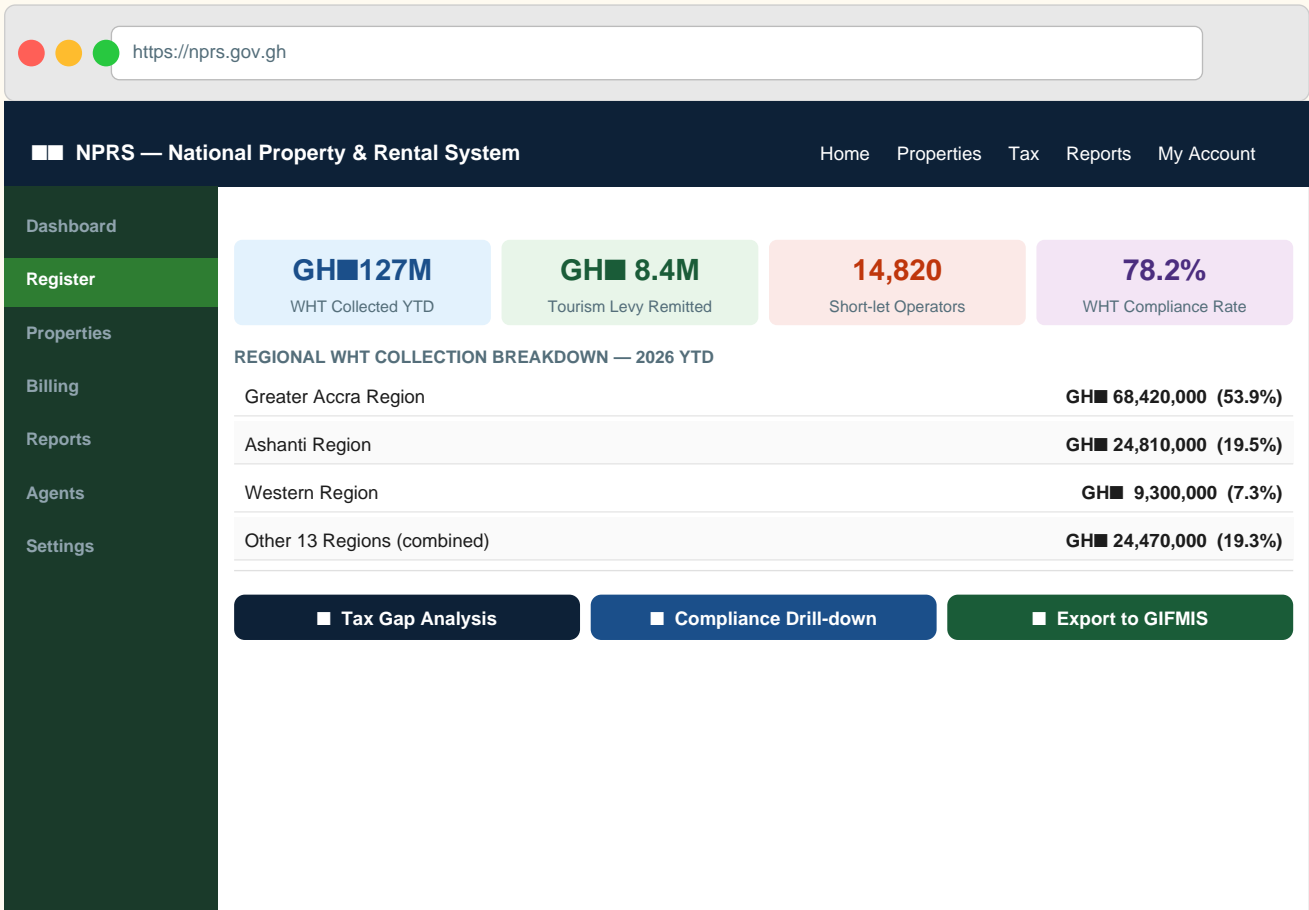


Fig. 7.2 — GRA National Analytics Dashboard: WHT and Tourism Levy tracking

# USSD Interface (\*770#)

Feature-phone accessible property registration and payment via USSD

08

## Why USSD Matters for Ghana

More than 40% of Ghanaians use feature phones without internet access. The USSD channel ensures no citizen is excluded from NPRS. By dialling \*770# on any network (MTN, Vodafone, AirtelTigo), citizens can check their property rate balance, make a payment, and report a property issue — all without a smartphone or data plan.

## USSD Menu Structure

Code	Menu Option	Description
*770#	NPRS Main Menu	Welcome screen; enter Ghana Card number to authenticate
1	My Properties	View registered properties and current rate balance
1-1	Property Details	View NPRS-ID, ARV, current bill, last payment date
1-2	Pay Outstanding	Pay via MoMo – enter amount, approve on phone
2	Register a Property	Begin registration (GPS + basic details; full completion via agent)
3	Report an Issue	Wrong valuation, ownership dispute, payment not credited
4	WHT Certificate	Request WHT certificate sent via SMS (landlords only)
0	Back / Main Menu	Return to previous menu or exit

## USSD Screen Examples



Fig. 8.1a — USSD Main Menu

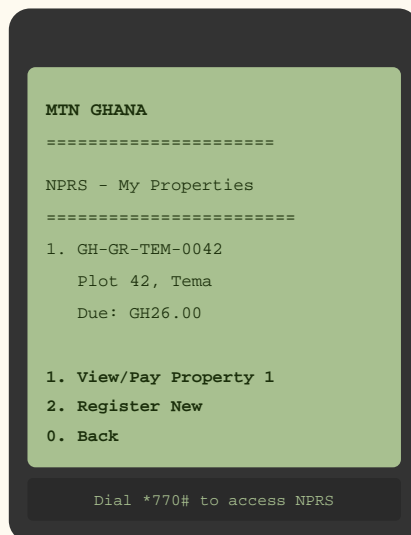


Fig. 8.1b — Property List



Fig. 8.1c — Payment Confirmation

# Developer API Reference

Key endpoints, request/response examples, and error handling

# 09

## API Design Principles

All NPRS APIs follow OpenAPI 3.1 specification, use JSON request/response bodies, and are versioned at `/api/v2/`. Authentication uses Bearer JWT tokens obtained from the identity-service. All timestamps are ISO 8601 UTC. All monetary amounts are in Ghanaian Cedis (GHS) as decimal numbers with 2 decimal places.

## Key API Endpoints

Endpoint	Method	Service	Description
<code>/api/v2/identity/verify</code>	POST	identity-service	Verify Ghana Card + TIN; returns verified name and platform token
<code>/api/v2/properties</code>	POST	property-registry	Register new property; returns NPRS-ID on success
<code>/api/v2/properties/{nprsId}</code>	GET	property-registry	Get full property record including valuation and billing status
<code>/api/v2/properties/{nprsId}/tax</code>	GET	tax-calculator	Get current tax assessment: ARV, rate, gross bill, reliefs, net bill
<code>/api/v2/rentals</code>	POST	rental-service	Register tenancy agreement; activates WHT computation
<code>/api/v2/rentals/{id}/payments</code>	POST	rental-service	Record rent payment; auto-computes WHT and queues GRA remi
<code>/api/v2/shortlet/listings</code>	POST	shortlet-service	Register short-let listing; links to Airbnb account
<code>/api/v2/payments/initiate</code>	POST	payment-gateway	Initiate MoMo/card payment; returns redirect URL or USSD promp
<code>/api/v2/payments/{ref}/status</code>	GET	payment-gateway	Check payment status; returns CONFIRMED, PENDING, or FAILE
<code>/webhooks/v1/airbnb/bookings</code>	POST	shortlet-service	Airbnb webhook: receive booking events, auto-compute taxes
<code>/api/v2/agents/{id}/registrations</code>	GET	agent-service	Get agent's registration history and commission ledger
<code>/api/v2/mmda/{id}/propertyroll</code>	GET	analytics-service	Get paginated property roll for an MMDA (MMDA auth required)

## Example: Register a Property

### REQUEST / RESPONSE EXAMPLE

```
POST /api/v2/properties
Authorization: Bearer eyJhbGciOiJSUzI1NiJ9...
Content-Type: application/json
```

REQUEST BODY:

```
{
  "ownerGhCard": "GHA-00012345-6",
  "ownerTin": "P00123456789",
  "propertyType": "RESIDENTIAL",
  "useType": "OWNER_OCCUPIED",
  "gpsLat": 5.6037,
  "gpsLng": -0.1870,
  "locationCode": "GE-491-3498",
  "floorArea": 120,
  "yearBuilt": 2008,
  "landTitleRef": "LC/GA/2008/04521"
}
```

RESPONSE 201 Created:

```
{
  "nprsId": "GH-GR-TEM-0042-0001-7",
  "status": "ACTIVE",
  "mmdaDetected": "Tema Metropolitan Assembly",
  "estimatedArv": 14400.00,
  "estimatedAnnualRate": 103.68,
  "documentVerificationPending": true,
  "registrationDate": "2026-04-13T09:41:22Z",
  "message": "Registration successful. SMS sent to owner."
}
```

ERROR RESPONSE 422:

```
{
  "error": "GHANA_CARD_INVALID",
  "message": "Ghana Card GHA-00012345-6 not found in NIA database",
  "code": "NIA_001",
  "retryAllowed": true
}
```

# Security & Data Protection

Act 843 obligations, encryption standards, and compliance calendar

10

## Data Classification

All data handled by NPRS is classified into four levels. Every developer must understand which classification applies to each field they work with, and apply the correct technical controls. Mishandling SECRET data is a criminal offence under Act 843.

Classification	Examples	Required Controls
<b>SECRET</b>	Ghana Card biometrics, raw NIA data, GRA full AS-256 files, AMV files	AES-256 files, AMV files + HMAC-SHA256 tokenisation; access requires 2FA + su
<b>CONFIDENTIAL</b>	Property ARV/value, rent amounts, owner identity, State address, TVeD, Bank details	AES-256 files, RBAC; full audit log; 10-year retention
<b>INTERNAL</b>	NPRS-ID, property location, use type, MMDA code, billing state	Role, billing state-based access; basic audit log; 10-year retention
<b>PUBLIC</b>	Aggregate revenue stats (anonymised), number of properties per region	Open data portal per specific requirements

## Developer Security Checklist

- Ghana Card numbers must NEVER be stored in plain text. Use HMAC-SHA256 token stored in identity-service only.
- All API endpoints must verify JWT token AND check RBAC permissions inside the service (not only at gateway).
- Every financial transaction (payment, disbursement) must write to the immutable audit log with before/after state.
- No secrets (API keys, database passwords) may be committed to Git. Use Vault / environment secrets only.
- Unit test coverage for tax calculation functions must be 100%. Use property-based testing (fast-check).
- All database migrations must be backward-compatible. Never drop a column without a multi-release deprecation plan.
- WCAG 2.1 AA must be validated by axe-core in CI before any PR to main is merged.
- API response time P95 must be under 800ms in load tests (k6 with 5,000 virtual users).
- Data Protection Commission registration must be renewed annually and kept current.
- Penetration test required quarterly. No critical/high CVE in production system.

## Compliance Calendar

When	Obligation	Responsible
<b>15th each month</b>	WHT remittance to GRA for prior month rental collections	payment-gateway (automated)
<b>30th each month</b>	Tourism levy remittance to Ghana Tourism Authority	payment-gateway (automated)
<b>31 January</b>	Annual property rate demand notices issued to all registered properties	billing-service (automated)
<b>31 March</b>	Q1 instalment deadline; 5% surcharge auto-applied from 1 April	billing-service (automated)
<b>30 June</b>	NPRS Annual Report to Ministry of Finance and Parliament	NPRS Management + Analytics
<b>31 October</b>	Annual valuation review cycle; update ARVs for flagged properties	Valuation Engine + MMDAs
<b>Quarterly</b>	Data Protection Commission filing; Privacy Impact Assessment update	NPRS Data Protection Officer

Quarterly	Penetration testing by accredited firm; remediation within 30 days	NPRS Security Officer
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***"Onipa na ohia onipa" — A person needs a person.***

NPRS is built not just for revenue collection, but to create a fair, transparent relationship between every Ghanaian property owner and their government — grounded in the communal values that define Ghana's identity.

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