

ROCKET & MISSILE IMPACT VERIFICATION

Open-source geospatial verification of two rocket and missile impact events in Israel — Gaza envelope, central Israel, and the northern border.
Events 25 Oct to 5 Nov 2023.

EVENTS VERIFIED	CONFIDENCE LEVEL	EVENT WINDOW	ATTRIBUTED ACTORS
02	HIGH	12 Days	Hamas · Hezbollah

§1 EXECUTIVE SUMMARY

This report analyzes two specific rocket and missile impact events in Israel between October 25 and November 5, 2023, selected for geographic distribution and strong corroborating digital evidence. Open-source analysis indicates a pattern of strikes by Hamas and Hezbollah **targeting civilian infrastructure, including residential areas and medical facilities.**

Impact sites were verified to high confidence through cross-correlation of ground-level imagery, official Red Alert data, and geospatial triangulation. Data visualization indicates a geographic shift from Hamas-attributed impacts concentrated in the Gaza envelope and southern cities in October, to the central Israeli population and the **northern border as Hezbollah activity intensified through early November.** All findings derive exclusively from public-domain sources.

KNOWN LIMITATIONS

 RESTRICTED AREA ACCESS	 LOW-RES IMAGERY WINDOWS	 ACTIVE CONFLICT ZONE
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DCR-202310-ISR-RKTP-001 · ASSESSMENT PARAMETERS

AUTHOR	DCR (Daniela Rutman)
SUBJECT	Rocket Impacts · S / C / N Israel
EVENT PERIOD	Oct – Nov 2023
DATE	23 March 2026
CLASSIFICATION	Unclassified
RELEASABILITY	Public · OSINT
EVENTS	Kiryat Shmona · Rishon LeZion
TYPE	Full Technical Report

SOURCE COMPOSITION

Google Earth Pro · Google Maps · OpenStreetMap · Mapillary · Mapbox · architectural feature triangulation · photographic metadata integrity checks · media forensics (The Times of Israel) · IDF operational updates · Meir Amit ITIC analytical context · Home Front Command Red Alert logs · Wayback Machine · Archive Today. Public-domain sources only. Classified and SIGINT material excluded.

§2

METHODOLOGY

2.1

DATA COLLECTION FRAMEWORK

All information was obtained through OSINT techniques relying on publicly available, verifiable data. Each incident was analyzed across five structured segments: Event Summary, Evidence Collected, Geospatial & Visual Verification, Chronological Analysis & Timeline, and Assessment — ensuring a consistent and replicable framework. Source material was drawn from four primary streams: media organizations, official statements, think tanks, and alert logs.

Visual evidence from **The Times of Israel** was geolocated to confirm geographic authenticity. Official statements were sourced from **IDF** operational updates. Analytical context was provided by the **Meir Amit ITIC**. HFC alert logs established the temporal framework for cross-validation.

2.2

VERIFICATION WORKFLOW

Each incident underwent a multi-step verification workflow: **Geospatial Analysis** via Google Maps, Google Earth Pro, and OpenStreetMap to triangulate impact sites. **Metadata analysis** was conducted where possible; where EXIF data had been stripped by media rehosting, photographic integrity was assessed through visual and contextual consistency audits. Archival research via web archives and HFC repositories was verified on social channels. Final confirmation required triangulation among at least one independent and one official source.

2.3

ANALYTICAL TOOLS

Google Earth Pro

Google Maps

OpenStreetMap

Mapillary

Mapbox

Wayback Machine

Archive Today

HFC Alert Repos

2.4

EVENT SELECTION CRITERIA

Events were drawn from a broader pool of rocket and missile attacks targeting Israeli territory between October 7 and November 28, 2023 — the initial escalation phase following the Hamas offensive. Selection criteria prioritized: confirmed impact on civilian infrastructure, availability of strong corroborating digital evidence, and geographic diversity.

Four candidate events were identified. Two were selected — the **October 25 strike on Rishon LeZion** and the **November 5 strike on Kiryat Shmona** — for their geographic contrast and strength of available evidence.

TABLE 1 · ROCKET EVENTS – OCT-NOV 2023

MONTH	DATE	TIME (IST)	CITY	TYPE
October	25	09:30 PM	Rishon LeZion	Missiles
November	05	07:12 PM	Kiryat Shmona	Missiles

Source: Original framework developed for this report

2.5

LIMITATIONS & TRANSPARENCY

Exact impact locations could not always be pinpointed to specific structures due to restricted satellite visibility or limited ground-level imagery. Social media content was integrated only when independently verifiable through identifiable landmarks or corroboration by a mainstream news outlet. This report excludes all classified information and SIGINT.

2.6

CONFIDENCE FRAMEWORK

TABLE 2 · CONFIDENCE CRITERIA

LEVEL	TECHNICAL REQUIREMENT
LOW	Single-source media; no HFC alert data or visual evidence for triangulation.
MODERATE	Matching architectural features but lacks official timestamp or impact-site footage.
HIGH	3+ matching architectural features, corroborated by HFC alert logs and 1 independent media source.

Source: Original framework developed for this report

§3

EVENT 1 · NOVEMBER 05 — KIRYAT SHMONA

3.1

SUMMARY OF INCIDENT

On November 5, 2023, multiple Grad (Katyusha) rockets were launched from southern Lebanon toward Kiryat Shmona, northern Israel. The attack caused significant damage to residential homes, vehicles, and commercial properties, though **no injuries were reported** — a result attributed to the prior evacuation of most civilian residents. The incident formed part of the ongoing escalation along the Israel–Lebanon border following the October 7 Hamas offensive. The impact site was subsequently confirmed via geospatial triangulation of user-generated content.

3.2

EVIDENCE COLLECTED

The evidentiary basis comprises official military reporting, independent journalistic documentation, and technical alert logs. Primary substantiation was sourced from the **IDF** official real-time operational dashboard, confirming rocket launches toward the northern sector on November 5. This is corroborated by ground-level media coverage from **The Times of Israel**, providing visual documentation of structural damage on Tel Hai Boulevard.

The investigation integrated **HFC alert logs** to validate the timing of the engagement, and the incident was contextualized through the Meir Amit ITIC 2024 report *"Five Months of Hostilities on the Israel-Lebanon Border"* (p. 5). The synthesis of these four source categories enables independent verification of the incident's location, timing, and impact.

IMAGE 1 · HFC ALERT LOG — KIRYAT SHMONA

2 Alerts

Sunday 05.11.2023



Missiles

🕒 21:26

Kiryat Shmona



🕒 19:12

Kiryat Shmona

Source: Home Front Command Archive · [oref.org.il](#)

3.3 GEOSPATIAL & VISUAL VERIFICATION

The physical location was confirmed through multi-stage geospatial triangulation, pinpointing the site at **Tel Hai Blvd, Kiryat Shmona**. Comparing nighttime social media footage against Google Street View imagery from July 2023, five immutable architectural anchors were identified. The distinctive **"stepped" roofline and commercial facade** match with high precision, while the placement of public stairs and a mature palm tree confirm the camera's orientation. Pavement markings and median geometry achieve **a verification margin of under five metres**. Structural damage patterns are consistent with a **122mm Grad-series rocket** — extensively documented in Hezbollah's confirmed arsenal.

Coordinates: 33.207159°N, 35.569646°E · Tel Hai Blvd, Kiryat Shmona

TABLE 3 · VERIFICATION & GEOLOCATION — KIRYAT SHMONA

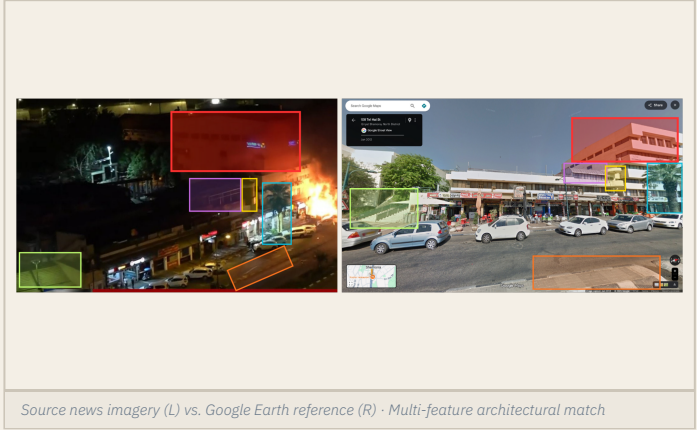
#	DESCRIPTION	SOURCE
1	Identified façade, window layout, and palm tree alignment visible in multiple images.	Images 1–3
2	Matched road curvature and light pole layout using Google Earth and Mapillary.	OSINT mapping
3	Cross-referenced with IDF operational reports and Times of Israel documentation.	IDF & media
4	Estimated coordinates: 33.207159, 35.569646.	OSINT estimate

Source: Original framework developed for this report

ANNOTATION KEY

- A • Structural Matching (purple/yellow):** Stepped roofline and commercial facade provide definitive architectural match to Street View reference.
- B • Environmental Markers (green/cyan):** Public stairs and mature palm tree establish triangulation margin of under five metres.
- C • Forensic Detail (orange):** Median pavement patterns verify camera orientation as north-northwest.

IMAGE 2 · VISUAL CORROBORATION — KIRYAT SHMONA



Source news imagery (L) vs. Google Earth reference (R) · Multi-feature architectural match

Source: Original framework developed for this report

3.4 CHRONOLOGICAL ANALYSIS

The temporal sequence was established by reconciling digital timestamps from UGC with official IDF notification logs. The incident began with **Red Alert (Tzeva Adom) sirens at 21:26 IST**, as recorded on the IDF "Israel at War" operational dashboard. Within two minutes, at 21:29 IST, the first reports of fire and rescue activity were logged, corresponding to the impact on Tel Hai Boulevard.

3.5 ASSESSMENT

The November 5 attack on Kiryat Shmona resulted in a direct rocket impact on a commercial and residential zone on Tel Hai Boulevard. Through synthesis of official IDF reporting and forensic matching of **five independent architectural features**, the impact site was verified with High Confidence. While structural damage was extensive, prior evacuation of civilians and the efficacy of the early warning system prevented casualties.

TABLE 4 • CONFIDENCE ASSESSMENT – KIRYAT SHMONA

ASPECT	CONF.	EVIDENCE BASE
Geolocation	HIGH	Google Street View, UGC footage
Date/Time	HIGH	IDF dashboard, Times of Israel
Authenticity	HIGH	IDF operational updates, Meir Amit ITIC

Source: Original framework developed for this report

§4 EVENT 2 • OCTOBER 25 – RISHON LEZION

4.1 SUMMARY OF INCIDENT

On October 25, 2023, at approximately 21:30 IST, a heavy rocket barrage from the Gaza Strip targeted central and southern Israel. One projectile struck a **residential structure at Zeitlin Street (2–10) in Rishon LeZion**, causing significant structural damage across multiple floors and lightly injuring six civilians. The incident occurred during a broader escalation with simultaneous sirens across Ashkelon, Petah Tikva, and greater Tel Aviv.

4.2 EVIDENCE COLLECTED

Primary substantiation was sourced from the **IDF** operational dashboard, confirming rocket launches toward the central sector on October 25. Ground-level media coverage from **The Times of Israel** provided visual documentation of structural damage and casualty figures on Zeitlin Street. HFC alert logs confirmed missile alert activations for the Rishon LeZion sector, providing the temporal framework. User-generated content showing the damaged facade and rescue operations was cross-referenced with Google Street View for site confirmation.

IMAGE 3 · HFC ALERT LOG – RISHON LEZION

2 Alerts

Wednesday 25.10.2023

Missiles

🕒 21:30

Rishon LeZion - East

🕒 19:04

Rishon LeZion - East

Source: Home Front Command Archive - oref.org.il

4.3 GEOSPATIAL & VISUAL VERIFICATION

The impact site was pinpointed through the triangulation of **six distinct architectural and environmental markers** identified in nighttime incident footage and archival reference imagery.

Coordinates: 31.984900°N, 34.789847°E · Zeitlin St (2-10), Rishon LeZion

TABLE 5 · VERIFICATION & GEOLOCATION – RISHON LEZION

#	DESCRIPTION	SOURCE
1	Identified façade profile, window morphology, protective grating, and palm tree alignment.	Images 1–4
2	Matched building setback, perimeter fencing, and vegetation using Google Earth and Street View.	OSINT mapping
3	Cross-referenced with IDF operational reports and Times of Israel documentation.	IDF & media
4	Estimated coordinates: 31.984900, 34.789847.	OSINT estimate

Source: Original framework developed for this report

IMAGE 4 · VISUAL CORROBORATION – RISHON LEZION



Source social and news imagery (L, M) vs. Google Earth reference (R) · Façade feature match

Source: Original framework developed for this report

ANNOTATION KEY

- A · Rooftop Profile (White):** Rooftop ledge and drainage pipe geometry matches reference imagery.
- B · Upper Window Morphology (Orange):** Top-floor window configuration and protective grating provides primary architectural match.
- C · Mid-Level Window Detail (Yellow):** Secondary window and grating pattern corroborates building floor layout.
- D · Biological Marker (Cyan):** Mature palm tree on western facade serves as permanent environmental anchor.
- E · Entrance Gate (Green):** Ground-level security gate and entrance layout confirms street-level orientation.
- F · Ornamental Tiling (Purple/Blue):** Distinctive window tiling corroborates exact address.

4.4 CHRONOLOGICAL ANALYSIS

The temporal sequence was established by reconciling UGC timestamps with HFC notification logs. On October 25, **two missile alert activations were recorded** for Rishon LeZion: 19:04 IST and 21:30 IST (National Emergency Portal, [oref.org.il](#)). The impact on Zeitlin Street corresponds to the second alert at **21:30 IST**, consistent with Times of Israel reporting of structural damage in the immediate aftermath.

4.5 ASSESSMENT

The October 25 attack on Rishon LeZion resulted in a direct rocket strike on a residential structure on Zeitlin Street. Through triangulation of **six independent architectural and environmental markers**, the impact site was verified with High Confidence — the strongest evidentiary basis across both analyzed events. Six civilians sustained light injuries, with structural damage across multiple floors.

TABLE 6 • CONFIDENCE ASSESSMENT – RISHON LEZION

ASPECT	CONF.	EVIDENCE BASE
Geolocation	HIGH	Google Street View, UGC footage
Date/Time	HIGH	IDF dashboard, Times of Israel
Authenticity	HIGH	IDF operational updates, Meir Amit ITIC

Source: Original framework developed for this report

§6 REFERENCES

Israel Defense Forces. (2023, Nov 5). *Real-Time Updates: Northern Sector*. [idf.il/en/mini-sites/israel-at-war/real-time-updates/#november](#)

Israel Home Front Command. (2023). *Alert History Archive*. [oref.org.il/eng/alerts-history](#)

Meir Amit ITIC. (2024). *Five Months of Hostilities on the Israel-Lebanon Border*. p. 5. [terrorism-info.org.il/app/uploads/2024/03/E_037_24.pdf](#)

§5 FINAL CONCLUSION & INSIGHTS

The OSINT investigation confirms a high-confidence pattern of **civilian infrastructure targeting across multiple geographic sectors**. While the initial focus was concentrated in the southern Gaza envelope, the **strategic density shifted toward northern population centers by early November**, corroborating broader intelligence assessments regarding the widening of the conflict's operational theaters. Consistent use of early-warning systems and pre-emptive evacuations remains the primary factor in low casualty rates despite extensive structural damage.

- 01 **Civilian infrastructure affected.** Pattern of Hamas and Hezbollah strikes targeting residential areas and medical facilities across both events.
- 02 **Impact-density shift.** Concentration in Gaza envelope / central Israel in late October moves to the northern border by early November — the central finding of the dataset.
- 03 **Multi-feature triangulation.** Both sites confirmed on distinct architectural features, not on any single visual cue.
- 04 **Fully reproducible.** Public-domain sources only. SIGINT and classified material excluded. Confidence assessment accompanies each incident.

TRANSPARENCY & REPRODUCIBILITY

All findings derive from public-domain sources. Classified and SIGINT material is excluded. Social media content was used only where independently verifiable through established reporting. This report is published under TLP:CLEAR and may be freely shared.