

# Incident Assessment

Incident ID	CIV0266
Location	38 Barabashova Street, Saltivka District, Kharkiv
Coordinates	<a href="#">50.0232, 36.3224</a> <sup>1</sup>
Date	27/02/2022
Time	Some time during the night of 26-27/02/2022, and before 07:41 EET on 27/02/2022

## Description of the Events

During the night of 26-27/02/2022, what appears to have been a cluster munition attack took place on the Saltivka district in Kharkiv, including at 38 Barabashova Street. The earliest identified upload of an image of the impact near the location of the Incident was posted on 27/02/2022 at 07:41 EET ([Source 1](#)<sup>2</sup>). Source 1 is a post on Telegram which contains two images of the rocket motor embedded next to a playground.

## Key Findings

- On 27/02/2022 several images and video were posted depicting two munition remnants, one embedded immediately next to a playground and the other approximately 30 m further away, next to a driveway (“the Incident”).
- The Incident was geolocated to [50.0231, 36.3224](#)<sup>3</sup> which corresponds to the address: 38 Barabashova Street in the city of Kharkiv, Ukraine.
- The rocket fragments seen in the Incident appear to be parts of rocket motors for 9M55K rockets.
- No military objects were identified in the possible area of impact.
- The exact area of impact of the submunitions was not identified.
- The exact location of launch was not identified; however, it is possible to identify the general direction of origin.

## Description of Searches

The CIVHARM sheet lists one more source for this Incident. It is a Telegram post on a channel named @truexanewsua ([Source 2](#)<sup>4</sup>). The post contains two images of two different munition remnants: one image of the munition remnant embedded in the ground next to a playground; another image of a munition remnant embedded in the ground next to what appears to be a driveway.

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<sup>1</sup> <https://goo.gl/maps/E1GcN1Jn2na6kPEH7>

<sup>2</sup> [https://t.me/ostorozhno\\_novosti/5502](https://t.me/ostorozhno_novosti/5502)

<sup>3</sup> <https://goo.gl/maps/E1GcN1Jn2na6kPEH7>

<sup>4</sup> <https://t.me/truexanewsua/30188>

Searches for more information on the Incident, including more pictures, videos, etc., of the possible moment of strike or any other related images and videos were conducted for the day of 27/02/2022 in the area of Saltivka in the city of Kharkiv. The searches were done in three languages: English, Ukrainian and Russian. This led to several international media reports, as well as an aftermath footage on Youtube, and more images on both Telegram and Twitter.

## Background Summary of Significant Descriptive Content

### Media Reports

27/02/2022: Russian forces made an attempt to seize the city. Fighting occurred inside the city limits of Kharkiv and according to the Kharkiv Regional Governor, Russian forces were repelled.

- [Governor of Kharkiv post on Facebook](#)<sup>5</sup> - report on keeping full control over the city of Kharkiv and repelling the recent attempt by Russian forces to enter the city;
- [The Guardian](#)<sup>6</sup> - Kharkiv Governor claims that Russian troops were repelled from the city;
- [Al Jazeera](#)<sup>7</sup> - report on events related to ousting Russian troops from the city;
- [Reuters](#)<sup>8</sup> - general overview of Russian troops being repelled from the city.

### NGO Reports

- [HRW](#)<sup>9</sup> - report mentions multiple cluster munition attacks including attacks in the city of Kharkiv;
- [Amnesty International](#)<sup>10</sup> - report on different types of indiscriminate attacks, including the one on 27/02/2022 taking place on Saltivka district of Kharkiv.

### Other

- [ISW](#)<sup>11</sup> - report on events in Ukraine on 27/02/2022 mentioning that “*Russian forces began shelling of residential areas of the city of Kharkiv throughout February 27*”.

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<sup>5</sup>

<https://www.facebook.com/synegubov.oleg/posts/pfbidoNwGd5Bxe4UkM7cKja8jdd1F8TPKcwovhAMF9Hsmx5byJLPaynrZuniEVqTWjW84Gl>

<sup>6</sup> <https://www.theguardian.com/world/2022/feb/27/kharkiv-fighting-russia-ukraine-invasion>

<sup>7</sup>

<https://www.aljazeera.com/news/2022/2/27/street-battles-in-kharkiv-as-russians-enter-ukraines-2nd-city>

<sup>8</sup>

<https://www.reuters.com/world/europe/russian-troops-enter-ukraines-kharkiv-ukrainian-official-2022-02-27/>

<sup>9</sup> <https://www.hrw.org/news/2022/08/16/ukraine-unlawful-russian-attacks-kharkiv>

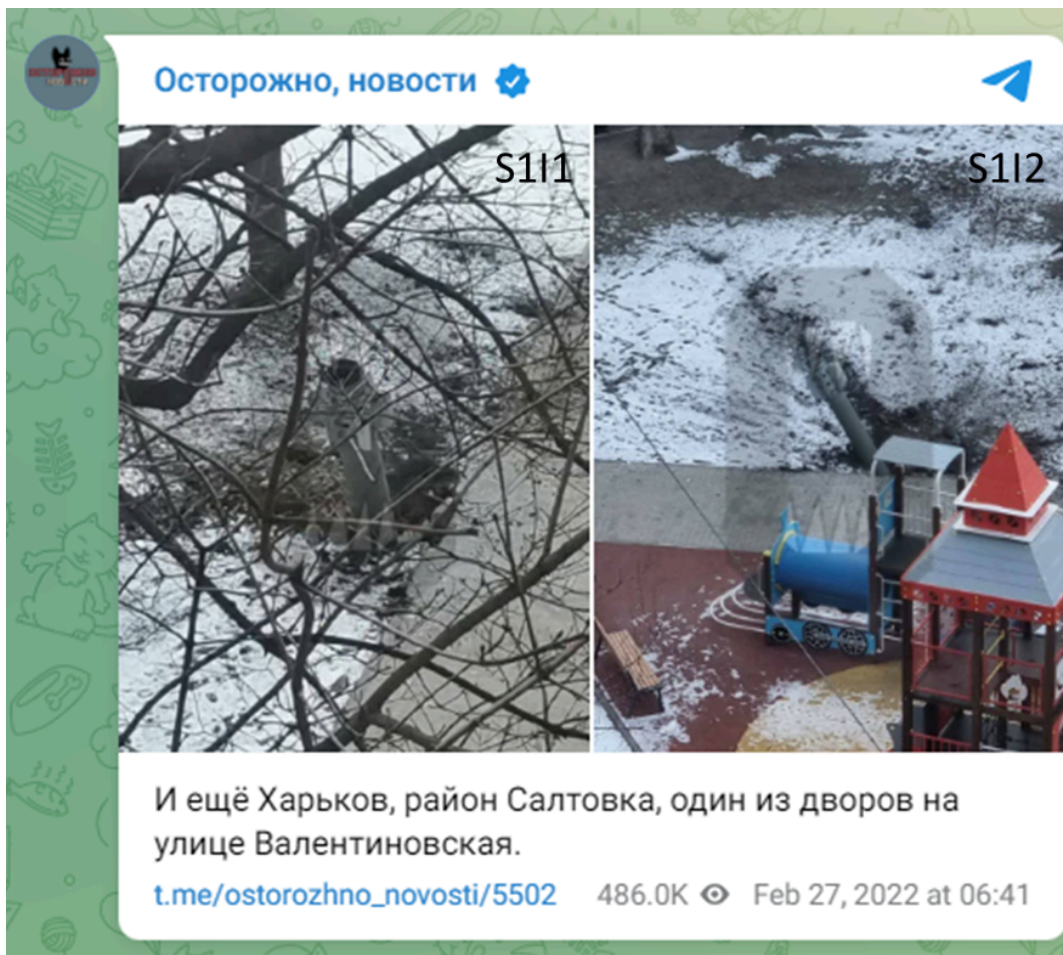
<sup>10</sup> <https://www.amnesty.org/en/latest/research/2022/06/anyone-can-die-at-any-time-kharkiv/>

<sup>11</sup>

<https://www.understandingwar.org/backgrounders/russia-ukraine-warning-update-russian-offensive-campaign-assessment-february-27>

## Analysis of Examinable Content

- **Source 1**<sup>12</sup>: A Telegram post made on 27/02/2022 at 07:41 EET containing two images that depict a munition remnant embedded in the ground next to the playground. One image depicts the rocket motor embedded right next to what appears to be a pathway seen from above through the branches of what seems to be a tree (**S1I1**); the second image depicts the rocket motor embedded right next to what appears to be a pathway from the perspective of the side of the playground, part of which is visible next to the pathway and the rocket motor (**S1I2**). Text supporting the images could be translated into English as follows: “And more in Kharkiv, Saltivka district, one of the courtyards on Valentynivska Street”.



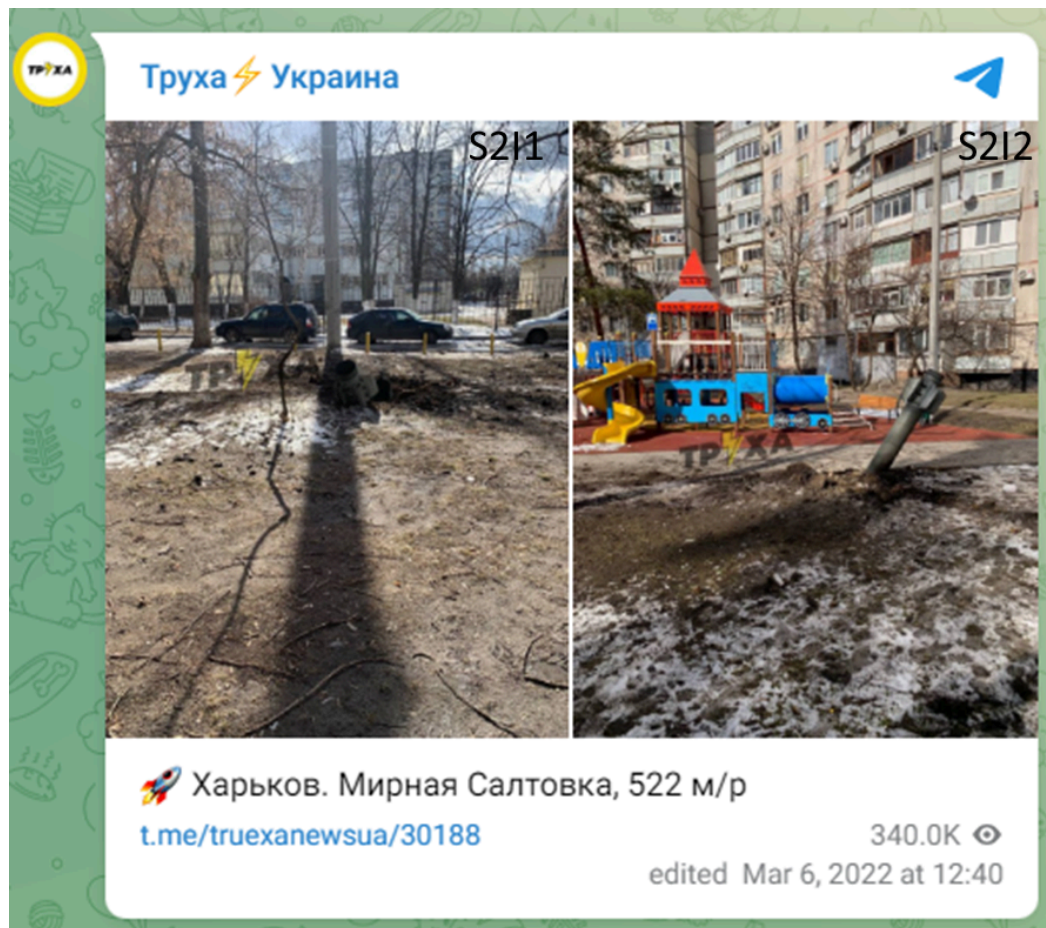
Source 1 containing S1I1 and S1I2. Note that the Telegram timestamp shown is in CET.

- **Source 2**<sup>13</sup>: A Telegram post made on 06/03/2022 at 13:40 EET. The post shows two images of two munition remnants embedded in the ground. Specifically, the left image depicts what appears to be a rocket motor embedded in the ground in the area close to what appears to be a driveway (**S2I1**). The right image depicts a rocket motor embedded in the ground next to what appears to be a pathway next to a playground (**S2I2**). The text accompanying the images could be translated into English as follows: “Kharkov.

<sup>12</sup> [https://t.me/ostorozhno\\_novosti/5502](https://t.me/ostorozhno_novosti/5502)

<sup>13</sup> <https://t.me/truexanewsua/30188>

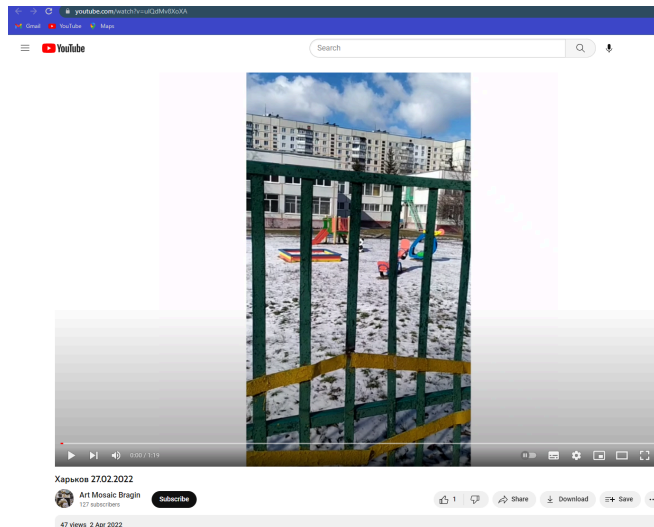
Peaceful Saltovka, 522 m/r” (“522 m/r” is most likely a reference to the 522nd micro district of the city of Kharkiv).



Source 2 containing S2I1 and S2I2. Note that the Telegram timestamp shown is in CET.

- **Source 3**<sup>14</sup>: A Youtube video of two stitched-together (at 00:48) pieces of footage of the aftermath of an attack on the Saltivka district of Kharkiv. Video (**S3V1**) was posted on 02/04/2022 at 16:59 EET. The video shows what appear to be several munition remnants embedded in the ground in two different areas of Saltivka district in Kharkiv, including the one next to the pathway and the playground as well as the other next to the driveway as mentioned above in the description of the Source 2.

<sup>14</sup> <https://www.youtube.com/watch?v=ulQdMv8XoXA>



*Screenshot of the Source 3, containing S3V1.*

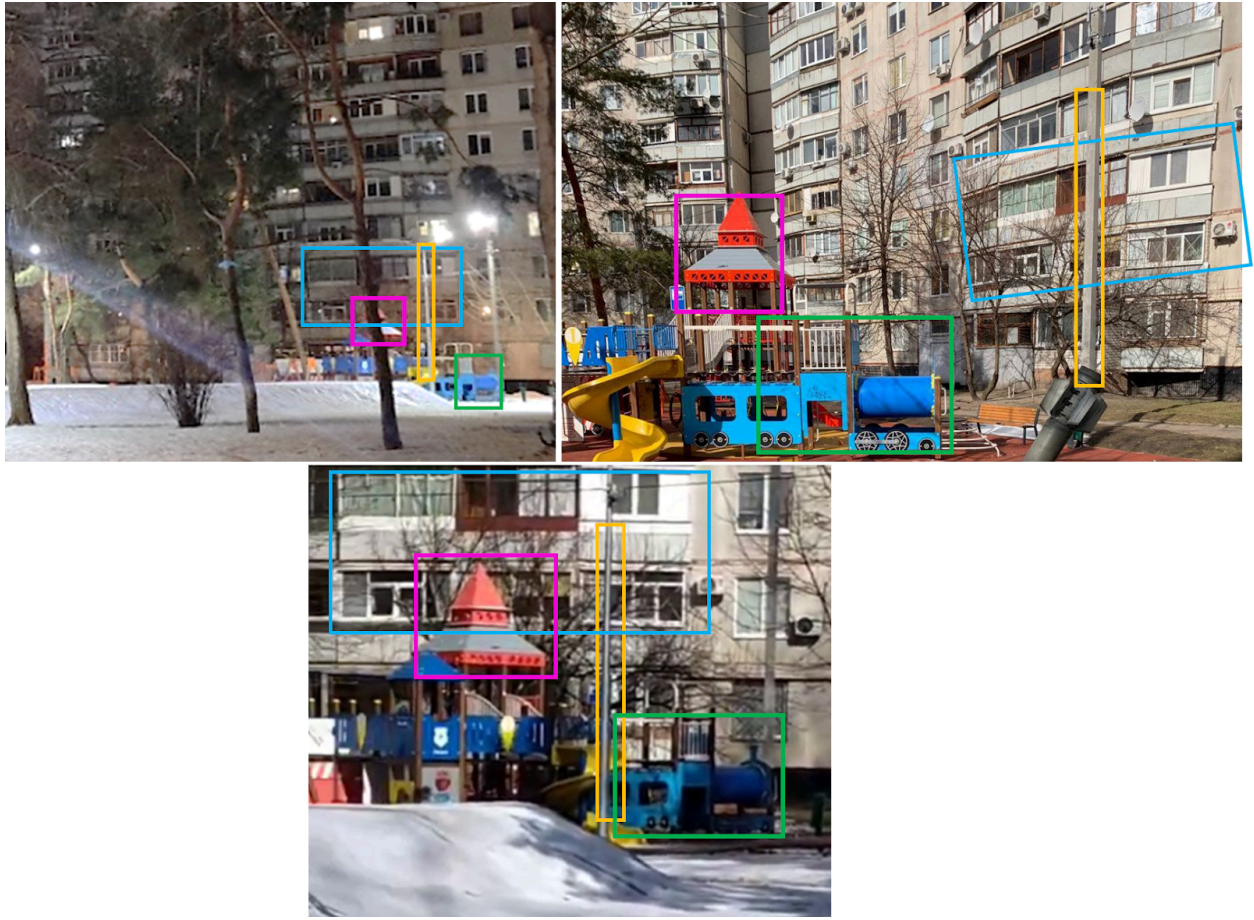
## Questions to Investigate

### Where Was the Incident?

The location of the Incident was geolocated by a peer researcher to the following coordinates: [50.0231, 36.3224](https://goo.gl/maps/E1GcN1Jn2na6kPEH7)<sup>15</sup>. These coordinates correspond to the address: 38 Barabashova Street, Kharkiv.

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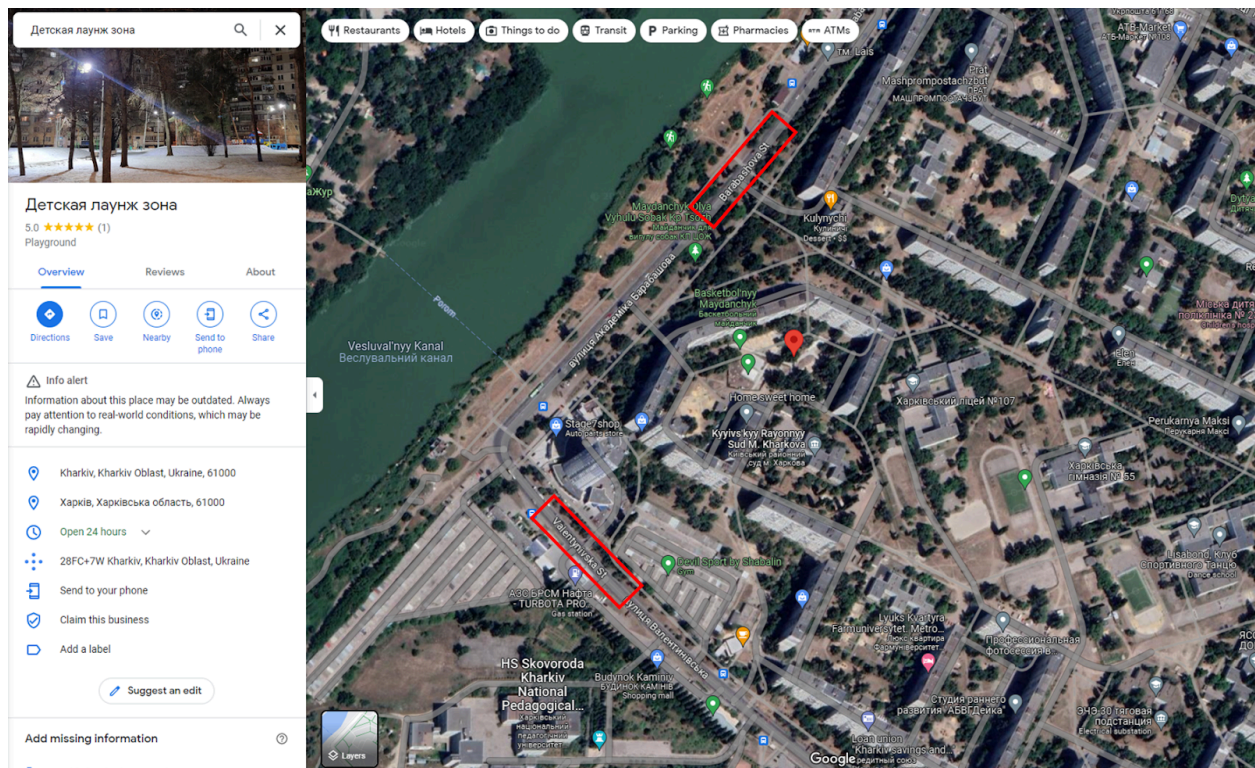
<sup>15</sup> <https://goo.gl/maps/E1GcN1Jn2na6kPEH7>



*Top Left: A photo from [Google Maps](https://maps.app.goo.gl/EUZNpoVEjERZo5QD9)<sup>16</sup> (cropped and enlarged) depicting partially visible playground with the following distinctly visible objects: 1) a street light pole (orange rectangle); 2) a set of six windows of matching design of the apartment building (blue rectangle); 3) a blue train on the playground (green rectangle); a red roof of the part of the playground set (pink rectangle). Top Right: cropped and enlarged S2I2 containing the same objects. Bottom: A still from S3V1 at 00:59 containing the same objects.*

Furthermore, the text accompanying the images in Source 1 mentions that they were taken in one of the courtyards on Valentynivska street. According to Google Maps, Valentynivska street intersects Barabashova street near the apartment building number 38, which coincides with the location of the playground geolocated above.

<sup>16</sup> <https://maps.app.goo.gl/EUZNpoVEjERZo5QD9>



A Screenshot from [Google Maps](https://maps.app.goo.gl/HFZgvarUf3unvt4Z8)<sup>17</sup> depicting the names of the Valentynivska and Barabashova streets (marked with red rectangles), as well as the location of the playground (marked with a red pin) (Credit: Google).

A panorama made from a series of stills from S3V1 shows the most likely possible location of the munition remnant shown in the S2I1 as well as another munition remnant shown in S1I1; S1I2 and S2I2, as well as the proximity of the two rocket motors with regards to each other and their most likely direction of origin.



A Panorama made from the series of stills from S3V1.

Based on the panoramic visualization of the locations of both munition remnants they can be seen from the satellite perspective as follows:

<sup>17</sup> <https://maps.app.goo.gl/HFZgvarUf3unvt4Z8>

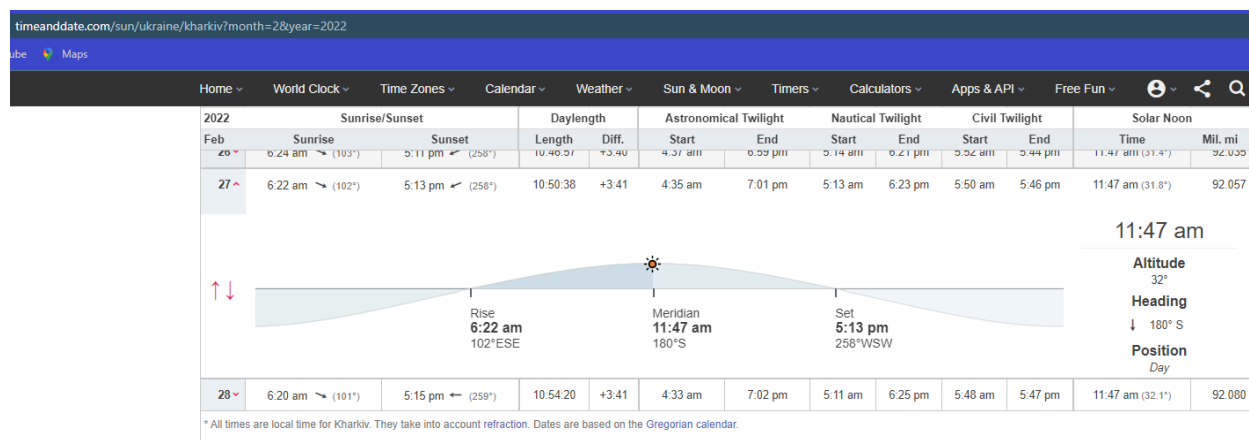


*A Screenshot of Google Earth Pro depicting the locations of the munition remnants next to the playground (marked yellow pin CIV0266\_1) and location of the munition remnant next to the driveway (marked with yellow pin CIV0266\_2) (Credit: Google/Maxar Technologies).*

## **When Was the Incident?**

The earliest identified mention of the Incident on social media is Source 1, uploaded on 27/02/2022 at 07:41 EET.

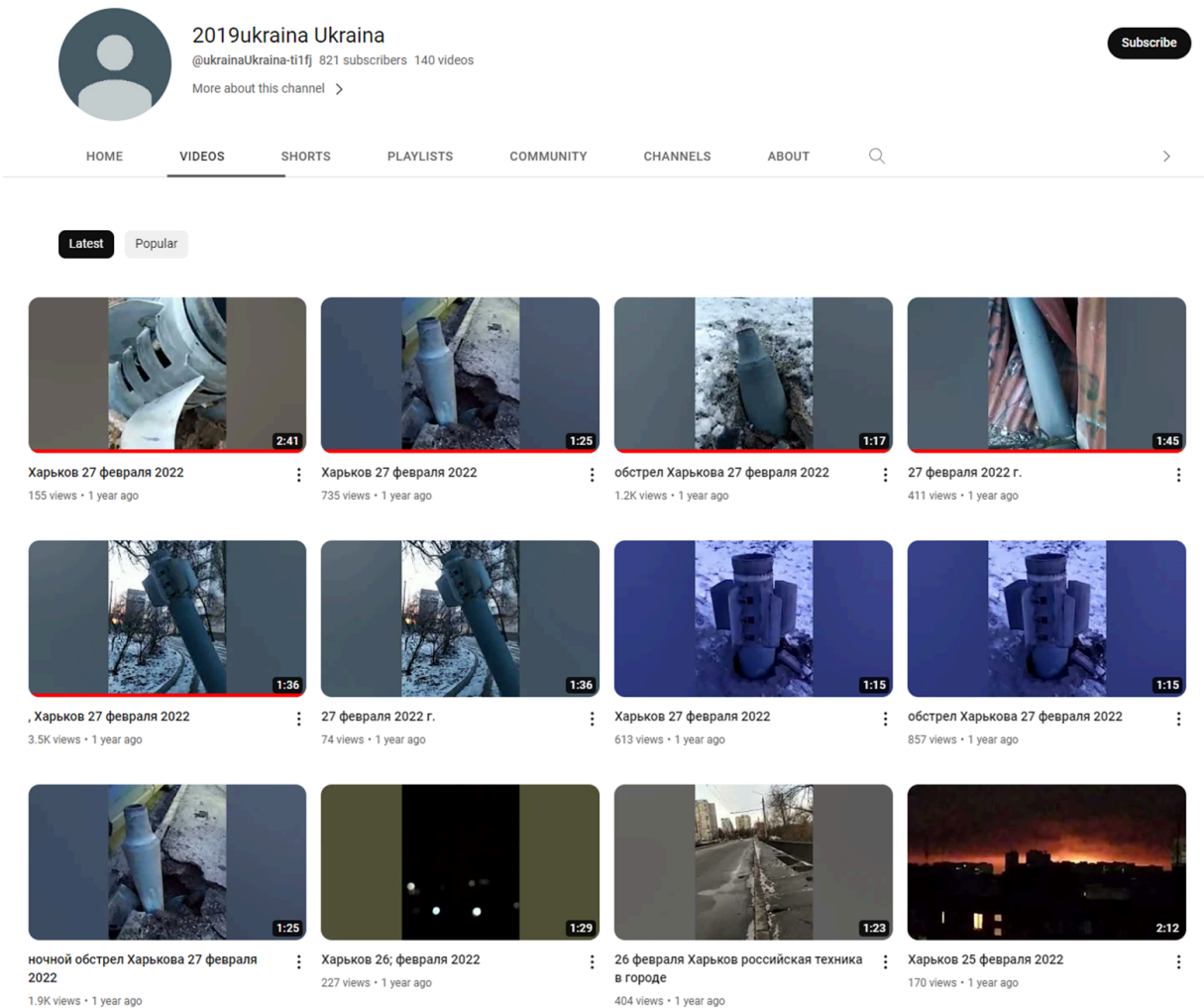
According to [Timeanddate.com](https://timeanddate.com), in this location the sun rose at 06:22 and set at 17:13 - a range in which the Incident falls within. Other techniques to determine the exact time, such as shadow analysis, were not possible due to the cloudy conditions.



The exact time of the attack is unlikely to be identified due to the high probability that the Incident occurred during the night of 26-27/02/2022. This assumption is supported by several [other videos](#)<sup>18</sup> and [images](#)<sup>19</sup> depicting munition remnants consistent with 9M55K rocket motors on different other locations of Saltivka district taken by the local residents emerging in the morning after spending the night in either bomb shelters, basements or other safe places. Their reactions indicate that these remnants were not present the day before.

<sup>18</sup> <https://www.youtube.com/@ukrainaUkraina-ti1fj/videos>

<sup>19</sup> <https://twitter.com/2022Kharkiv/status/1497906951732318208?s=20>



Screenshot of Youtube channel [@ukrainaUkraina-ti1fj](https://www.youtube.com/channel/UCukrainaUkraina-ti1fj) depicting a series of videos of the aftermath of apparent strikes on the morning of 27/02/2022 in the city of Kharkiv, Saltivka district.

A lack of footage depicting the moment of the strike means that it is not possible to establish the exact timing of when the Incident happened.

## What Kind of Munition Was Used?

The imagery of the remnant taken from Sources 1; 2 and 3 appears to match the distinct tail of a 9M55K rocket, with three equally spaced hinges on the tail. This matches reference cards produced by the Associate Arms Director of Human Rights Watch.

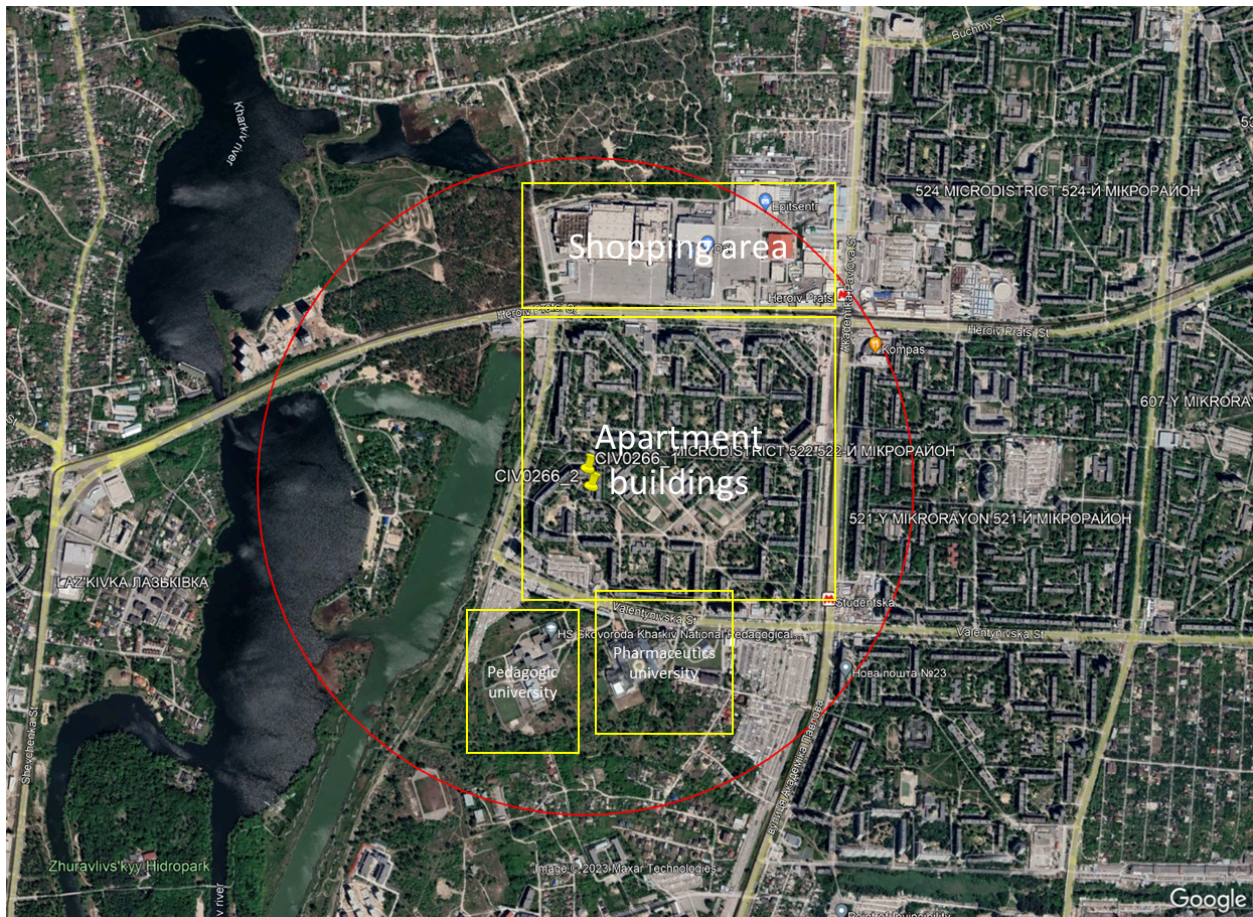


Left: S2I1. Middle: A missile recognition [reference card](#)<sup>20</sup> from the official Twitter page of Human Rights Watch Associate Arms Director. Right: S2I2,

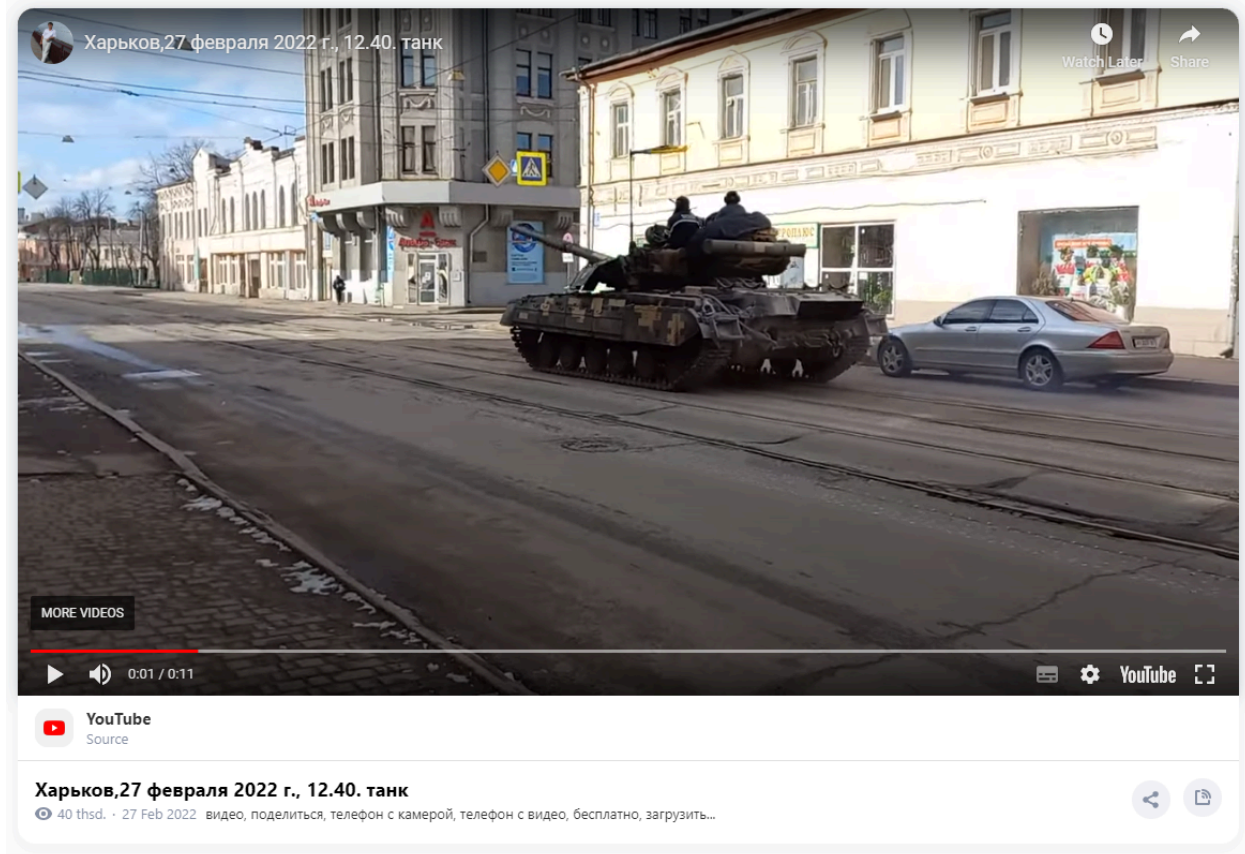
## Were There Military Structures, Installations or Other Assets in the Area?

No military objects were identified through open sources within the area of 1 km radius around the Incident.

<sup>20</sup> [https://twitter.com/MarkHiznay/status/1496719886009126912?s=20&t=YjisQbzIfzMFdp\\_ozOoKw](https://twitter.com/MarkHiznay/status/1496719886009126912?s=20&t=YjisQbzIfzMFdp_ozOoKw)



It was also worth noting that videos of the Ukrainian forces moving around the city of Kharkiv were found on [Youtube](#)<sup>22</sup>; however, it is not possible to conclude whether they were present near the location of the Incident at the time of the attack.



*A Screenshot from the [Youtube video](#)<sup>23</sup> taken at 00:01 showing movement of the Ukrainian military vehicles on 27/02/2022.*

## **Is There Any Evidence of the Direction the Munition Came from?**

Based on the angle of the rocket motor as observed in Sources 1-3, the investigator made an assessment of the likely direction of origin. This was assessed as being a bearing of 57 degrees from north from the point of impact for CIV0266\_1 munition remnant and 45 degrees from north for CIV0266\_2 munition remnant.

When fired from a BM-30, the 9M55k rocket, according to the [Army Recognition](#)<sup>24</sup> website, has a range of 20 to 70 km. When combined with the arc of direction of origin, this gives us an area of origin within which this 9M55K was likely fired from.

<sup>22</sup> <https://www.youtube.com/watch?v=GZY-ooURWwc>;  
<https://www.youtube.com/watch?v=C8bJmmxpuMQ>

<sup>23</sup> <https://www.youtube.com/watch?v=C8bJmmxpuMQ>

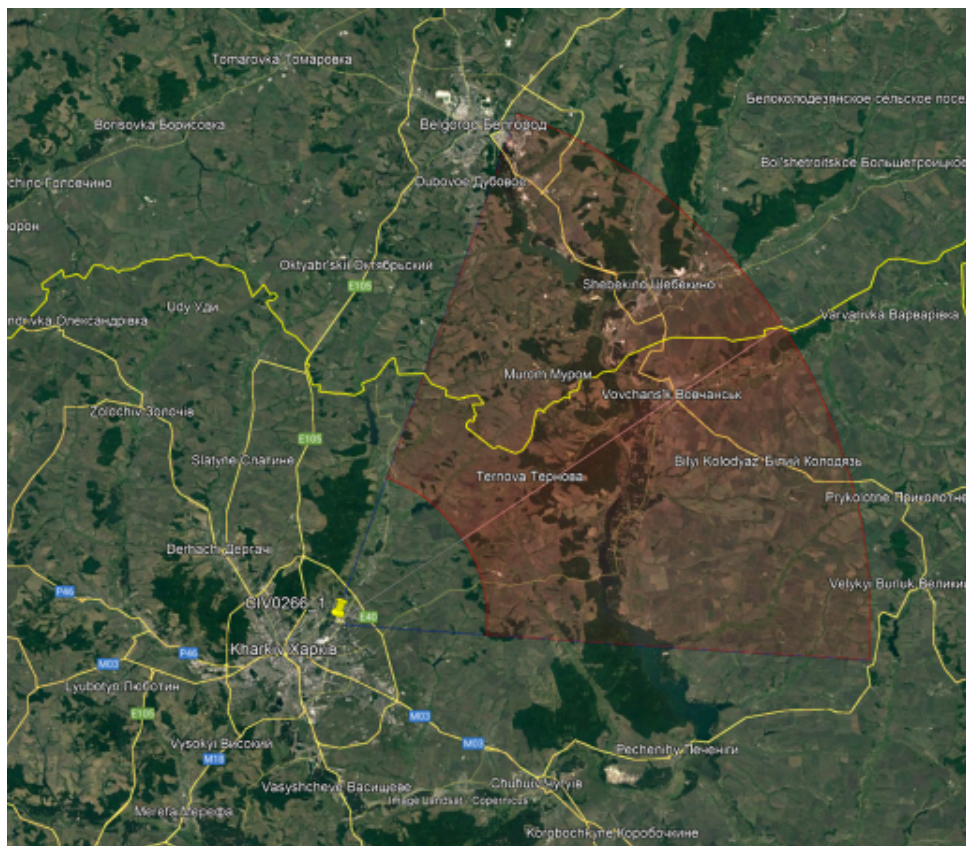
<sup>24</sup>

[https://www.armyrecognition.com/russia\\_russian\\_army\\_vehicles\\_system\\_artillery\\_uk/bm-30\\_smerch\\_9k58\\_300mm\\_multiple\\_rocket\\_launcher\\_system\\_technical\\_data\\_sheet\\_information\\_description.html](https://www.armyrecognition.com/russia_russian_army_vehicles_system_artillery_uk/bm-30_smerch_9k58_300mm_multiple_rocket_launcher_system_technical_data_sheet_information_description.html)

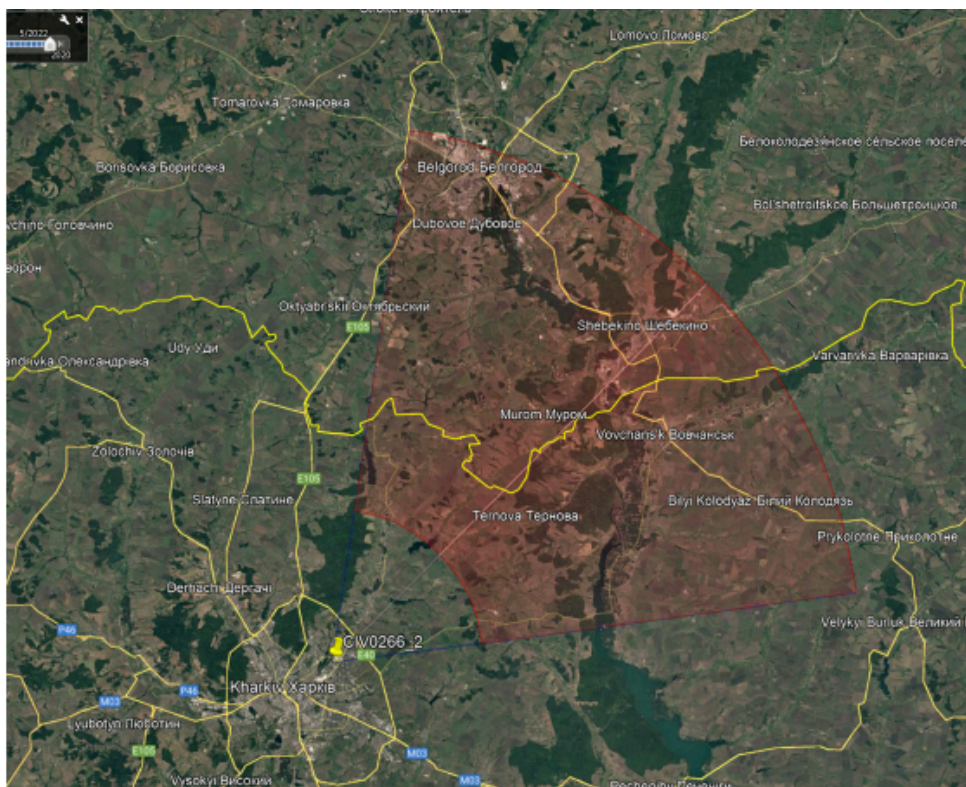
The investigator then applied the standardized BM-30 direction of origin template, in order to assess the likely area of origin.



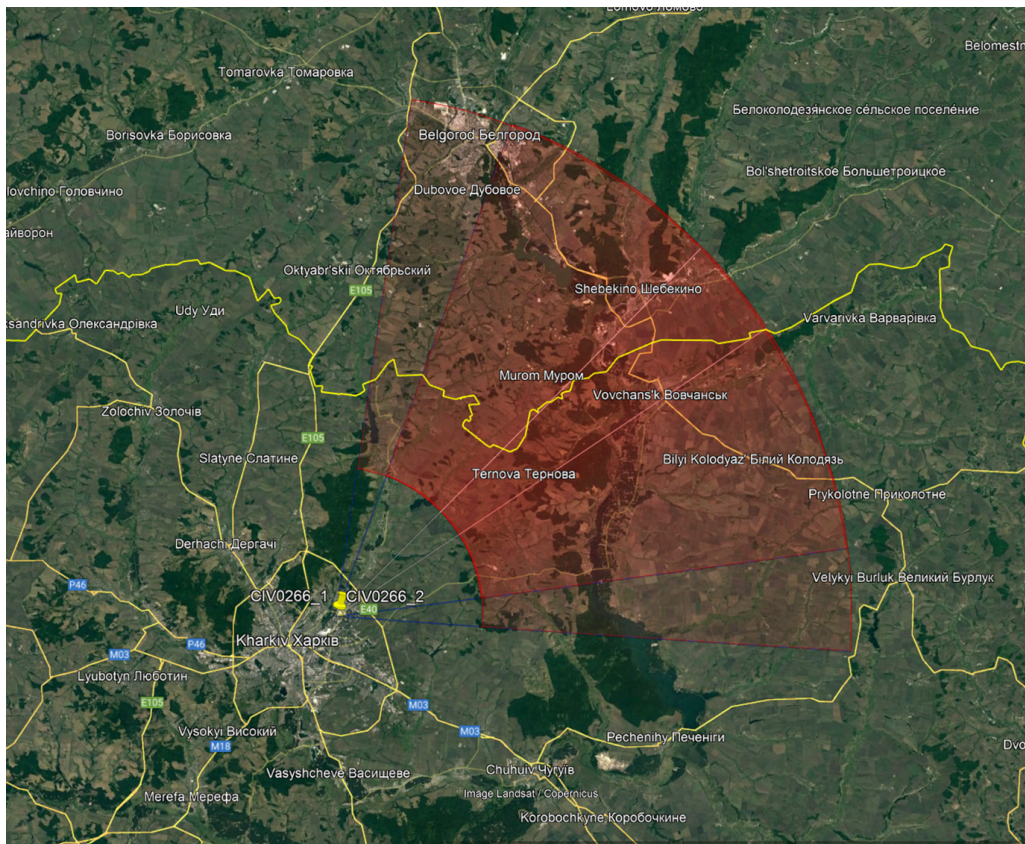
*A Screenshot of Google earth Pro depicting the locations of rocket motors (yellow pin CIV0266\_1 for the rocket motor next to the playground; yellow pin CIV0266\_2 for the rocket motor near the driveway) and red lines indicating the assessed s direction of origin respectively. (Credit: Google/Maxar Technologies).*



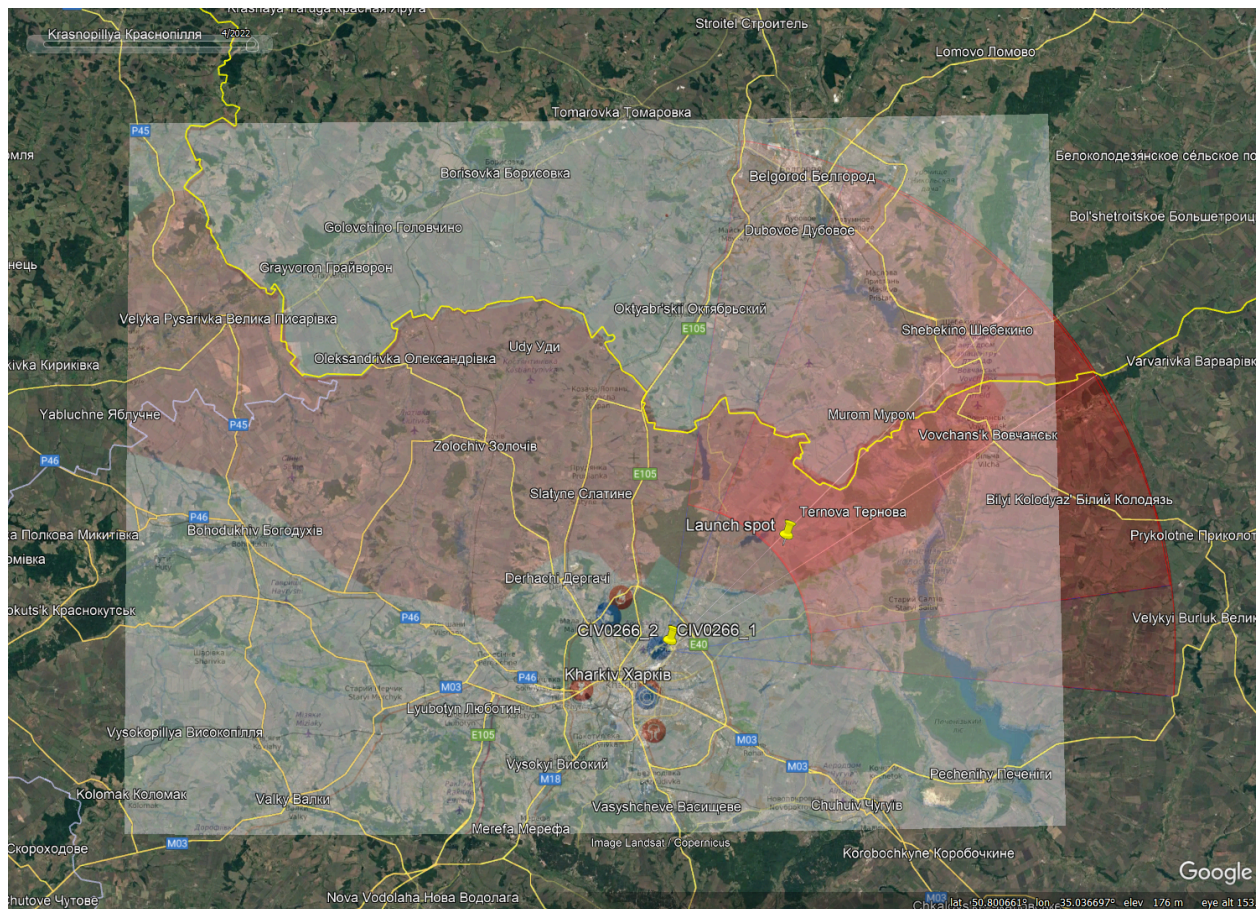
*A screenshot from Google Earth Pro of the area from which the attack related to CIV0266\_1 is likely to have originated, with the BM-30 template applied (Credit: Google/Landsat/Copernicus).*



*A screenshot from Google Earth Pro of the area from which the attack related to CIV0266\_2 is likely to have originated, with BM-30 template applied (Credit: Google/Landsat/Copernicus).*



*A screenshot from Google Earth Pro of the area from which the attacks related to both CIV0266\_1 and CIV0266\_2 are likely to have originated from, with BM-30 template applied (Credit: Google/Landsat/Copernicus).*



*A screenshot from Google Earth Pro with an overlaid data from [Liveuamap](https://liveuamap.com/)<sup>25</sup> as of 27/02/2022 showing the area under control of the Russian army (red areas on the semi transparent white rectangle), as well as BM-30 templates relating to Incidents CIV2206\_1 and CIV0266\_2 showing where the munition likely originated from.*

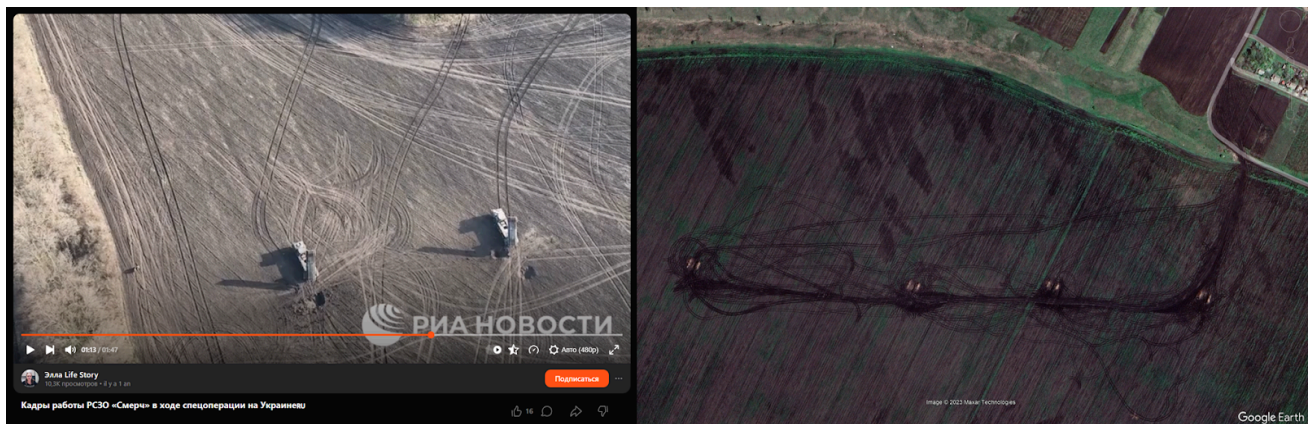
During the search of possible launch site areas within a distance of 20-25 km from the location of the munition remnants, the investigator found at least one location which appears to be a MLRS launch spit. The satellite view of the potential launch site is dated as of 04/2022. Additional investigation would be needed to establish if this location was in use on the time in question - night of 26/02/2022-27/02/2022.

<sup>25</sup> <https://liveuamap.com/>





*A screenshot from Google Earth Pro zoomed in to the location of the potential launch site depicting movement of what appears to be military trucks, tranches, and tire marks of what could be heavy duty vehicles (Credit: Google/Maxar Technologies).*



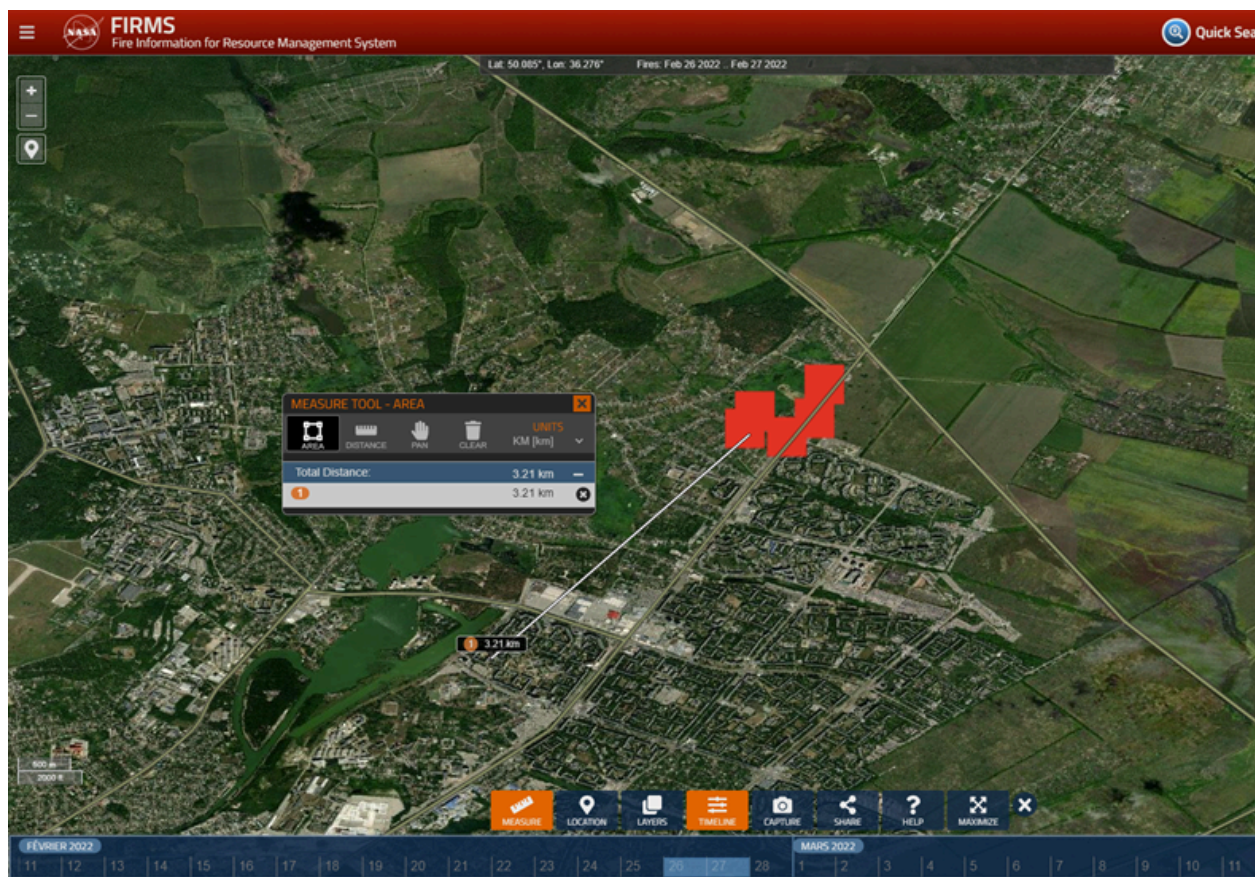
*Left: A screenshot from RIA News [video](#)<sup>26</sup> of a Smerch MLRS battery from a bird's eye view and their typical tire marks on the ground. Right: A screenshot from Google Earth Pro zoomed in to one of the fields near the location of the potential launch site, depicting a satellite view of what appears to be tire marks and possible burn marks on the ground of a heavy duty vehicle, possibly a MLRS launch vehicle (Credit: Google/Maxar Technologies).*

## Area of Impact

The exact area of impact was not identified. [NASA Firms](#)<sup>27</sup> data shows an area of satellite derived thermal anomalies (e.g., locations of actively burning fires) as of 27/02/2022 within a distance of 3.21 km from the location of the munition remnants intersecting the direction of origin.

<sup>26</sup> <https://dzen.ru/video/watch/6261963e30fb67477427c619?f=d2d>

<sup>27</sup> <https://www.earthdata.nasa.gov/firms>



*A screenshot from NASA Firms map depicting red squares as the area of thermal anomalies (fires) as of 27/02/2022 within a distance of 3.21 km from the location of the munition remnants intersecting its direction of origin (Credit: NASA Firms).*

## Timeline of the Incident

In the morning of [27/02/2022](#),<sup>28</sup> several military groups of Russian forces entered Kharkiv from several directions of the northern part of the city and moved towards the city center followed by street fighting with Ukrainian forces. Street fighting resulted in the defeat of Russian forces within the city.

In the morning of 27/02/2022, prior to Russian forces entering the city, residents of Kharkiv posted multiple examples of munition remnants which appear to have impacted during the night.

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<sup>28</sup>

<https://suspilne.media/398912-boi-za-okruznu-ta-zahoplenna-skoli-ak-rosijski-okupanti-rik-tomu-prori-valisa-do-harkova/>

## Statements from Parties of the Conflict

### Ukraine

“What the occupiers are doing to Kharkiv, Okhtyrka, Kyiv, Odesa and other cities and towns is being brought to an international tribunal!” - said the President of Ukraine, Volodymyr Zelenskyi in his [daily address](#)<sup>29</sup> on the war.

### Russia

Kremlin’s spokesperson Dmitry Peskov [denies](#) cluster munitions use in Ukraine.<sup>30</sup>

## Conclusion

An attack resulting in what appears to be two rocket motors impacting at 38 Barabashova Street took place sometime during the night of 26-27/02/2002. It appears the rocket motors are consistent with 9M55K rockets, indicating that this is likely a cluster munition attack. No military structures, installations or other assets were identified within 1 km radius of the location of the Incident.

## Further Action

Further analysis is merited on the identified potential launch site to establish whether it was active as of 26-27/02/2022.

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<sup>29</sup> [https://www.youtube.com/watch?v=GYr5LhEvN\\_E](https://www.youtube.com/watch?v=GYr5LhEvN_E)

<sup>30</sup> <https://www.gazeta.ru/politics/2022/03/01/14589073.shtml>