

# Daily Report 273/2019

18 November 2019<sup>1</sup>

## Summary

- Compared with the previous reporting period, between the evenings of 15 and 16 November, the SMM recorded more ceasefire violations in Donetsk region and fewer in Luhansk region.
- Between the evenings of 16 and 17 November, the Mission recorded more ceasefire violations in Donetsk region and fewer in Luhansk region, compared with the previous 24 hours.
- The SMM continued to monitor the situation at the Petrivske disengagement area.
- The Mission observed the construction of a 500m long barbed wire fence outside the Zolote disengagement area.
- Inside the Stanytsia Luhanska disengagement area, the Mission continued to observe construction works at the broken section of the bridge.
- The Mission continued to facilitate repairs to and the operation of critical civilian infrastructure, including to power lines near government-controlled areas of Luhansk region.
- Restrictions of the SMM's freedom of movement continued, including at checkpoints near non-government-controlled Zaichenko and Novoazovsk.\*

## Ceasefire violations<sup>2</sup>

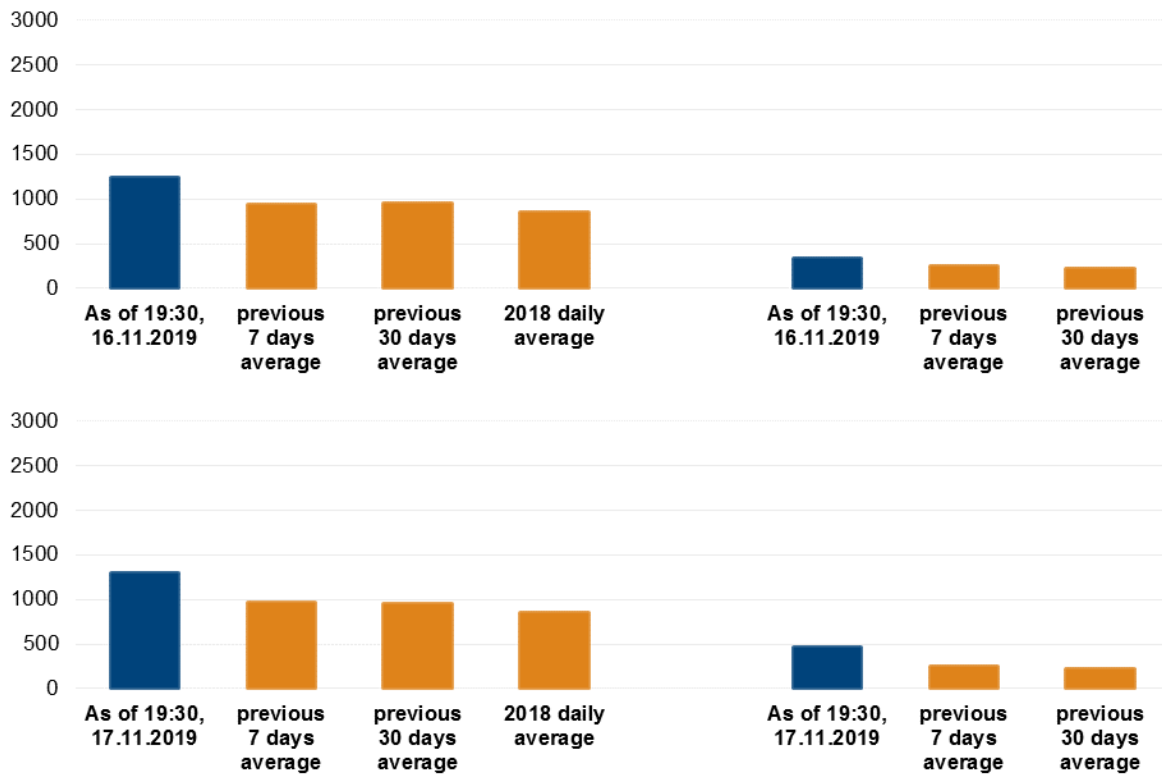
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<sup>1</sup> Based on information from the Monitoring Teams as of 19:30, 17 November 2019. All times are in Eastern European Time.

<sup>2</sup> For a complete breakdown of ceasefire violations, please see the annexed table.

### Number of recorded ceasefire violations<sup>3</sup>

### Number of recorded explosions<sup>4</sup>



### Map of recorded ceasefire violations

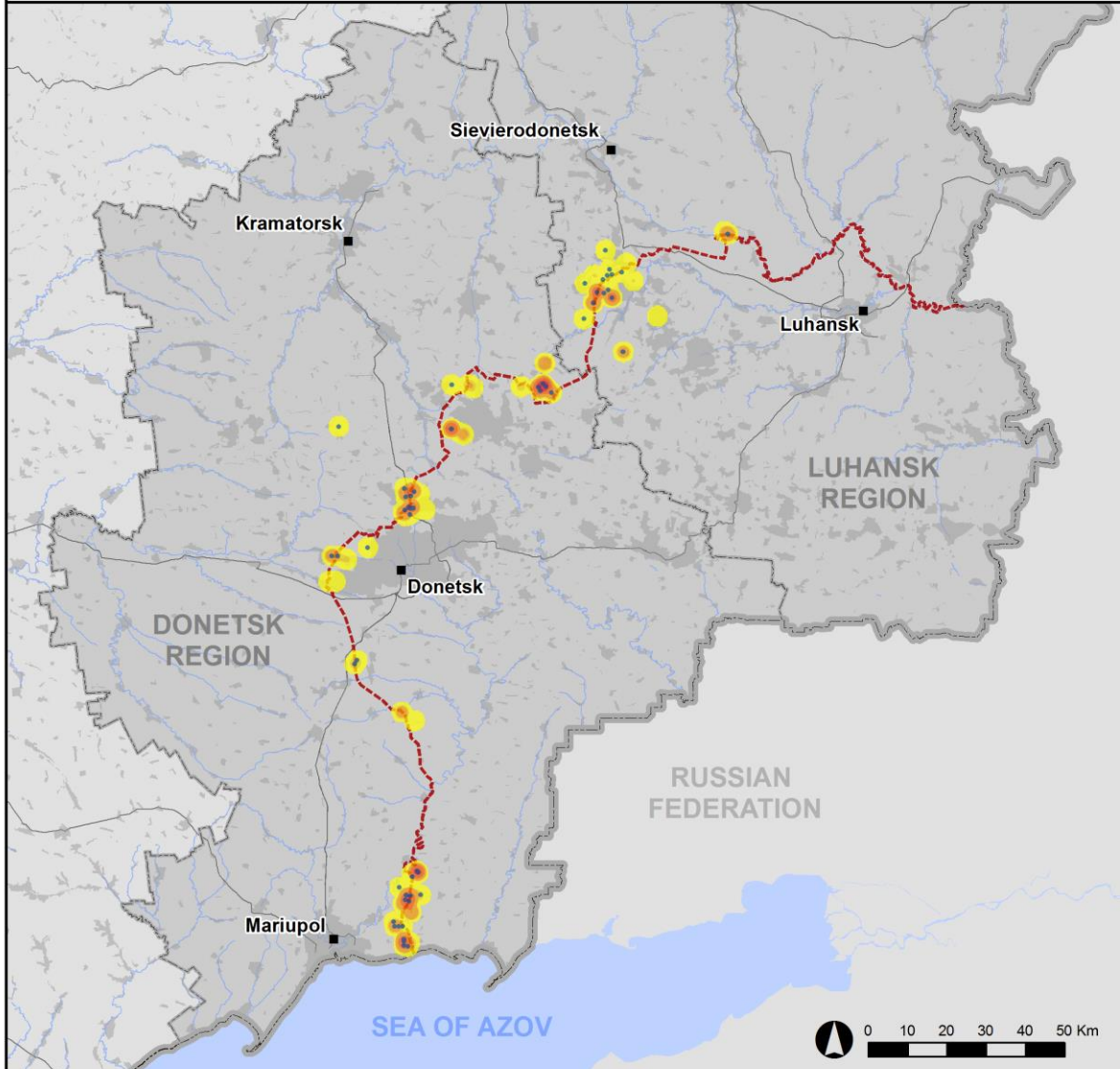
<sup>3</sup> Including explosions.

<sup>4</sup> Including from unidentified weapons.

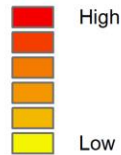


Organization for Security and  
Co-operation in Europe  
Special Monitoring Mission to Ukraine

## Ceasefire violations observed by the SMM 16-17 November 2019



### Ceasefire violation concentration



- Explosion
- Settlement
- ..... Estimated line of contact

Sources: Administrative Boundaries - OCHA; Roads, Rivers - OpenStreetMap; Sea - VLIZ (2005). IHO Sea Areas; Other - OSCE.

Coordinate System: WGS 1984 UTM Zone 37N

This map is provided for illustrative purposes only. Its content is not warranted to be error-free and does not imply endorsement or acceptance by the OSCE SMM.

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Created: 18/11/2019

In Donetsk region, between the evenings of 15 and 16 November, the SMM recorded more ceasefire violations, including more explosions (180), compared with the [previous reporting period](#) (about 95 explosions). The majority of the ceasefire violations were recorded in areas south-east and south-south-east of Svitlodarsk (government-controlled, 57km north-east of Donetsk), including the majority of explosions, at easterly directions of Hnutove (government-controlled, 90km south of Donetsk) and in areas south-east and south of Kamianka (government-controlled, 20km north of Donetsk).

Between the evenings of 16 and 17 November, the Mission recorded more ceasefire violations, including more explosions (about 290), compared with the previous 24 hours. The majority of the ceasefire violations were recorded in areas south-east of Chermalyk (government-controlled 77km south of Donetsk), at easterly directions of Hnutove and at southerly directions of Svitlodarsk. The SMM camera at the Donetsk Filtration Station (DFS) (15km north of Donetsk) recorded 35 undetermined explosions and 12 projectiles at an assessed range of 0.7-2km at southerly directions of the DFS.

In Luhansk region, between the evenings of 15 and 16 November, the SMM recorded fewer ceasefire violations, including fewer explosions (90), compared with the [previous reporting period](#) (about 100 explosions). The majority of the ceasefire violations were recorded in areas north-east and south-east of Popasna (government-controlled, 69km west of Luhansk) and in areas south-south-west of Kriakivka (government-controlled, 38km north-west of Luhansk), where the majority of explosions were recorded.

Between the evenings of 16 and 17 November, the Mission recorded fewer ceasefire violations, however, more explosions (about 180), compared with the previous 24 hours. The majority of the ceasefire violations, including the majority of explosions, were recorded in areas south of Kalynove-Borshchuvate (non-government-controlled, 61km west of Luhansk) and at south-easterly directions of Popasna.

### **Disengagement areas near Petrivske, Zolote and Stanytsia Luhanska<sup>5</sup>**

On 16 and 17 November, the SMM saw vehicles, workers and deminers from non-government-controlled areas driving towards **the disengagement area near Petrivske** (non-government-controlled, 41km south of Donetsk). On 16 November, the Mission heard three explosions, one of which it also saw, all assessed as controlled detonations of unexploded ordnance (UXO) inside the disengagement area.

Positioned 1.8km north of Petrivske, the SMM heard five shots of small-arms fire, at an assessed range of 1-2km south-south-west, assessed as outside the disengagement area.

On 16 and 17 November, positioned in Bohdanivka (government-controlled, 41km south-west of Donetsk), the Mission saw seven vehicles with approximately 20 personnel of the State Emergency Service (SES) of Ukraine driving from west of Bohdanivka towards the disengagement area.

On 17 November, positioned 1.3km north-east of Bohdanivka, the SMM heard 28 shots of small-arms fire at an assessed range of 2-3km north-north-east, assessed as outside the

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<sup>5</sup> Disengagement is foreseen in the Framework Decision of the Trilateral Contact Group relating to disengagement of forces and hardware of 21 September 2016.

disengagement area.

On the evening of 15 November, the SMM camera in Zolote (government-controlled, 60km west of Luhansk) recorded three projectiles in flight at an assessed range of 2-4km east, assessed as outside **the disengagement area near Zolote**. On the evening of 15 November and during the day of 16 November, positioned in three locations near the disengagement area, the Mission heard 11 undetermined explosions and about 100 shots and bursts of heavy-machine-gun and small-arms fire, all assessed as outside the disengagement area, but within its 5km periphery.

On 16 and 17 November, outside the disengagement area, the SMM [again](#) saw the installation of a 500m long fence consisting of eight horizontal barbed wire strands connected with wooden poles, about south of a road leading from Katerynivka (government-controlled, 64km west of Luhansk) to Zolote-4/Rodina (government-controlled, 59km west of Luhansk). On 17 November, in the same area outside the disengagement area, the SMM saw that a [previously reported](#) rectangular-shaped red coloured wooden sign (in Ukrainian language) in a field notifying the public about the prohibition to cross the area by foot or vehicles on the south-western edge of Zolote-4/Rodina was no longer present.

On 16 and 17 November, the SMM saw workers and deminers from non-government-controlled areas, with metal detectors and equipment, entering the disengagement area from the checkpoint of the armed formations on its southern edge. On 17 November, the workers and deminers were accompanied by three members of the armed formations (wearing armbands with “JCCC” written on them). Inside the disengagement area, the Mission heard two explosions, assessed as controlled detonation of UXO.

On 16 November, north of the disengagement area, the Mission saw five police vehicles, two mine resistant ambush protected (MRAP) vehicles of the National Guard and around 20 uniformed and armed police and National Guard officers patrolling areas, including Zolote-1/Soniachnyi (government-controlled, 61km west of Luhansk), Zolote-2/Karbonit (government-controlled, 62km west of Luhansk), Zolote-4/Rodina and the road leading to Katerynivka.

On 17 November, positioned in Zolote-3/Stakhanovets (government-controlled, 61km west of Luhansk), the SMM heard two undetermined explosions at an assessed range of 2-3km south-south-east, unable to be assessed whether inside or outside the disengagement area. Positioned in two other locations near the disengagement area, the Mission heard six undetermined explosions and seven shots of small-arms fire, all assessed as outside, but within its 5km periphery.

On 16 November, inside **the disengagement area near Stanytsia Luhanska** (government-controlled, 16km north-east of Luhansk), the SMM observed ten workers from government-controlled areas painting pillars of the new deck of the Stanytsia Luhanska bridge (15km north-east of Luhansk), sandblasting and welding new railings as well as clearing the slopes at the northern abutment of the bridge.

Inside the disengagement area, the Mission also saw three workers from non-government-controlled areas welding and bolting six benches south of the broken section of the bridge and another 21 workers from non-government-controlled areas and a member of the armed formations (wearing an armband with “JCCC” written on it) clearing and burning vegetation

on the southern bank of Sieverskyi Donetsk river and east of the shelter of an international humanitarian organization.

On 17 November, the SMM saw workers from government-controlled areas working on and below the newly constructed bridge deck, consolidating earth and painting its metal structure.

On the same day, near the shelter of an international humanitarian organization south of the bridge, the Mission saw staff of an international humanitarian organization resuscitating a 67-year-old man, travelling from non-government to government-controlled areas, who was later pronounced dead by one of the medical staff.

On 16 and 17 November, the Mission saw members of the armed formations (wearing armbands with “JCCC” written on them), four and seven respectively, between the bridge and the checkpoint of the armed formations.

### **Withdrawal of weapons**

The SMM continued to monitor the withdrawal of weapons in implementation of the Memorandum and the Package of Measures and its Addendum.

The Mission observed no weapons in violation of withdrawal lines. It saw four weapons beyond withdrawal lines but outside designated storage sites in a government-controlled area of Donetsk region (see table below).

### **Weapons that the SMM could not verify as withdrawn<sup>6</sup>**

16 November

*At a heavy weapons holding area in a government-controlled area of Donetsk region*

The SMM noted that:

- 19 tanks (T-64) and two surface-to-air missile systems (9K35 *Strela-10*, 120mm) were present; and
- 80 tanks (T-64) and 14 self-propelled howitzers (eight 2S3 *Akatsiya*, 152mm and six 2S1 *Gvozdika*, 122mm) continued to be missing. Additionally, 31 tanks (T-64) were missing for the first time.

### **Indications of military and military-type presence in the security zone<sup>7</sup>**

The SMM observed military presence inside the security zone in government-controlled areas of Donetsk and Luhansk regions (for further details, see the table below).

### **Border areas outside government control**

On 16 November, while at a border crossing point near Novoazovsk (102km south-east of Donetsk) for about 40 minutes, the SMM saw four cars (one with Ukrainian licence plates and three with “DPR” plates) and a covered cargo truck with “DPR” plate entering Ukraine. During

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<sup>6</sup> The SMM observed weapons that could not be verified as withdrawn, as their storage did not comply with the criteria set out in the 16 October 2015 notification from the SMM to the signatories of the Package of Measures on effective monitoring and verification of the withdrawal of heavy weapons.

<sup>7</sup> The hardware mentioned in this section is not proscribed by the provisions of the Minsk agreements on the withdrawal of weapons.



the same time, it also saw 40 cars (31 with Ukrainian licence plates and nine with “DPR” plates) and 11 covered cargo trucks (six with Ukrainian licence plates and five with “DPR” plates) exiting Ukraine.

On 17 November, while at the border crossing point near Uspenka (73km south-east of Donetsk) for about an hour, the SMM saw 20 cars (three with Ukrainian, eight with Russian Federation, one with Greek and one with Latvian licence plates, as well as seven with “DPR” plates), a bus with “DPR” plates and six pedestrians (five women and a man) entering Ukraine. During the same time, it also saw 22 cars (five with Ukrainian, and 12 with Russian Federation licence plates, and five with “DPR” plates), four covered cargo trucks (three with Ukrainian licence plates and one with “DPR” plates), two buses (one with Russian Federation licence plates and one with “DPR” plates) and 15 pedestrians (12 women and three men) exiting Ukraine.

### **Mine hazard signs near non-government-controlled Katerynivka**

On 16 November, the SMM saw for the first time three mine hazard signs on a local road about 2km south of Katerynivka (formerly Yuvileine, non-government-controlled, 8km west of Luhansk) each attached to a wooden stick with “Mines” written in Cyrillic letters.

### **SMM facilitation of repairs to and operation of critical civilian infrastructure**

On 16 and 17 November, the SMM monitored adherence to the ceasefire to facilitate repairs to power lines at the Petrivske pumping station near Artema (government-controlled, 26km north of Luhansk).

On 16 and 17 November, the Mission continued to facilitate the operation of the DFS and monitor the security situation around the pumping station near Vasylivka (non-government-controlled, 20km north of Donetsk). During the same period, the SMM recorded about 260 ceasefire violations, including 17 undetermined explosions within a 5km radius of the DFS.

The Mission continued monitoring in Kherson, Odessa, Lviv, Ivano-Frankivsk, Kharkiv, Dnipro, Chernivtsi and Kyiv.

### **\*Restrictions of the SMM’s freedom of movement or other impediments to fulfilment of its mandate**

*The SMM’s monitoring and freedom of movement are restricted by security hazards and threats, including risks posed by mines, UXO and other impediments – which vary from day to day. The SMM’s mandate provides for safe and secure access throughout Ukraine. All signatories of the Package of Measures have agreed on the need for this safe and secure access, that restriction of the SMM’s freedom of movement constitutes a violation, and on the need for rapid response to these violations. They have also agreed that the JCCC should contribute to such response and co-ordinate mine clearance. Nonetheless, the armed formations in parts of Donetsk and Luhansk regions frequently deny the SMM access to areas adjacent to Ukraine’s border outside control of the Government (for example, see [SMM Daily Report 26 October 2019](#)). The SMM’s operations in Donetsk and Luhansk regions remain restricted following [the fatal incident of 23 April 2017 near Pryshyb](#); these restrictions continued to limit the Mission’s observations.*

Denial of access:

- On 16 and 17 November, at a checkpoint north of Zaichenko (non-government-controlled, 93km south of Donetsk), armed members of the armed formations [again](#) denied the SMM passage south towards Sakhanka (non-government-controlled, 97km south of Donetsk) and west towards Pikuzy (formerly Kominternove, non-government-controlled, 92km south of Donetsk), citing “dangerous conditions and ongoing demining operation”.
- On 16 and 17 November, at a checkpoint north of Novoazovsk (non-government-controlled, 102km south of Donetsk), armed members of the armed formations denied the SMM passage, citing “ongoing drill”.

Conditional access:

- On 17 November, at a checkpoint north-west of Horlivka (non-government-controlled, 39km north-east of Donetsk), two armed members of the armed formations allowed the SMM to pass only after checking the trunk of its vehicles.

*Regular restrictions related to disengagement areas and mines/UXO:*

- The sides continued to deny the SMM full access, as well as the ability to travel certain roads previously identified as important for effective monitoring by the Mission and for civilians’ movement, through failure to conduct comprehensive clearance of mines, UXO and other obstacles.



### Table of weapons

#### Beyond withdrawal lines but outside of designated storage sites

Date	No. of weapons	Type of weapon	Location	Source of observation
<b>Government-controlled areas</b>				
16/11/2019	4	Anti-tank gun (MT-12 <i>Rapira</i> , 100mm)	Near Pokrovsk (formerly Krasnoarmiisk, 55km north-west of Donetsk)	Patrol

#### **Table of indications of military and military-type presence in the security zone<sup>8</sup>**

Date	No.	Type	Location	Source of observation
<b>Government-controlled areas</b>				
16/11/2019	1	Armoured personnel carrier (BTR-70)	Near Novokalynove (29km north-west of Donetsk)	Patrol
17/11/2019	1	Armoured personnel carrier (BTR-70)	Near Pshenychne (20km north-east of Luhansk)	Patrol

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<sup>8</sup>The hardware mentioned in this section is not proscribed by the provisions of the Minsk agreements on the withdrawal of weapons.

**Table of ceasefire violations as of 17 November 2019<sup>9</sup>**

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Berezove (government-controlled, 31km SW of Donetsk)	2-4km SE	Recorded	1	Projectile	WNW to ESE	N/K	15-Nov, 21:41
	2-4km ESE	Recorded	1	Projectile	NNE to SSW	N/K	15-Nov, 21:59
	2-4km ESE	Recorded	1	Projectile	NNE to SSW	N/K	15-Nov, 22:04
	2-4km ESE	Recorded	1	Projectile	NNE to SSW	N/K	15-Nov, 22:06
	2-4km ESE	Recorded	1	Projectile	NNE to SSW	N/K	15-Nov, 22:07
	2-4km SE	Recorded	1	Projectile	SW to NE	N/K	15-Nov, 22:13
	2-4km SE	Recorded		Explosion	Uncountable and impact	N/K	15-Nov, 22:13
	2-4km SE	Recorded	1	Projectile	SW to NE	N/K	15-Nov, 22:13
	2-4km SE	Recorded	2	Projectile	SW to NE	N/K	15-Nov, 22:14
	2-4km SE	Recorded		Explosion	Uncountable and impact	N/K	15-Nov, 22:14
	2-4km SE	Recorded	1	Projectile	W to E	N/K	15-Nov, 22:14
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 22:14
	2-4km SE	Recorded	2	Projectile	W to E	N/K	15-Nov, 22:15
	2-4km SE	Recorded	2	Projectile	SW to NE	N/K	16-Nov, 00:44
	2-4km SE	Recorded	1	Explosion		N/K	16-Nov, 01:48
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	2-7km SSE	Recorded	1	Projectile	SW to NE	N/K	15-Nov, 19:37
	2-7km SSE	Recorded	1	Projectile	NE to SW	N/K	15-Nov, 19:42
	2-7km SSE	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 19:42
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	0.7-1km SSW	Recorded	1	Projectile	E to W	N/K	15-Nov, 18:39
	1-2km SSW	Recorded	1	Illumination flare	In vertical flight	N/K	15-Nov, 18:39
	0.7-1km SSW	Recorded	1	Projectile	E to W	N/K	15-Nov, 19:41
	200-500m SSW	Recorded	2	Projectile	W to E	N/K	15-Nov, 21:34
	200-500m SSW	Recorded	1	Projectile	W to E	N/K	15-Nov, 21:54
	200-500m SSW	Recorded	1	Muzzle flash		N/K	15-Nov, 21:54
	1-2km SSW	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 01:56
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	3-5km E	Recorded		Explosion	Uncountable	N/K	15-Nov, 18:37
	3-5km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 18:37
	4-8km SE	Recorded	19	Projectile	NE to SW	N/K	15-Nov, 18:54
	4-8km SE	Recorded	4	Projectile	SW to NE	N/K	15-Nov, 18:54
	3-5km E	Recorded	2	Muzzle flash		N/K	15-Nov, 18:54
	4-8km SE	Recorded	4	Projectile	SW to NE	N/K	15-Nov, 18:55
	4-8km SE	Recorded	7	Projectile	NE to SW	N/K	15-Nov, 18:55
	4-8km SE	Recorded	20	Projectile	SW to NE	N/K	15-Nov, 18:56
	4-8km SE	Recorded	3	Projectile	NE to SW	N/K	15-Nov, 18:56
	4-8km SE	Recorded	3	Projectile	SW to NE	N/K	15-Nov, 18:57
	4-8km E	Recorded	2	Projectile	N to S	N/K	15-Nov, 19:21
	4-8km E	Recorded	6	Projectile	N to S	N/K	15-Nov, 19:22
	4-8km E	Recorded	1	Illumination flare	In vertical flight	N/K	15-Nov, 19:22
	3-5km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 19:27
	3-5km E	Recorded	3	Projectile	N to S	N/K	15-Nov, 19:32
	3-5km E	Recorded	4	Explosion	Undetermined	N/K	15-Nov, 19:32
	3-5km E	Recorded	3	Explosion	Undetermined	N/K	15-Nov, 19:37
	3-5km E	Recorded	2	Projectile	S to N	N/K	15-Nov, 19:37

<sup>9</sup> The table only includes ceasefire violations directly observed by the SMM and it may include those also assessed to be live-fire exercises, controlled detonations, etc. Details provided – in terms of distance, direction, weapons-type, etc. – are based on assessments provided by monitors on the ground, and are not always necessarily precise. When information is not known (indicated with an “N/K”), the SMM was unable to ascertain such information due to distance, weather conditions and/or other considerations. Ceasefire violations recorded by more than one patrol and assessed to be the same are entered only once.

	3-5km E	Recorded	1	Illumination flare	In vertical flight	N/K	15-Nov, 19:38
	3-5km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 19:43
	3-5km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 19:47
	2-4km SE	Recorded	3	Projectile	SSW to NNE	N/K	15-Nov, 21:29
	2-4km SE	Recorded	2	Projectile	NNE to SSW	N/K	15-Nov, 21:29
	2-4km SE	Recorded	1	Projectile	SW to NE	N/K	15-Nov, 21:56
	2-4km ESE	Recorded	1	Explosion		N/K	15-Nov, 22:08
	2-4km ESE	Recorded	1	Projectile	NW to SE	N/K	15-Nov, 22:08
	2-4km SE	Recorded	5	Projectile	N to S	N/K	15-Nov, 22:16
	2-4km SE	Recorded	1	Projectile	NNE to SSW	N/K	15-Nov, 22:17
	3-5km ESE	Recorded	6	Projectile	SSW to NNE	N/K	15-Nov, 22:19
	3-5km ESE	Recorded	3	Muzzle flash		N/K	15-Nov, 22:20
	3-5km ESE	Recorded	3	Projectile	NNE to SSW	N/K	15-Nov, 22:20
	3-5km ESE	Recorded	3	Projectile	SW to NE	N/K	15-Nov, 22:22
	2-4km SE	Recorded	1	Projectile	NNE to SSW	N/K	16-Nov, 02:53
	2-4km SE	Recorded	1	Projectile	In vertical flight	N/K	16-Nov, 02:53
	2-4km ESE	Recorded	11	Projectile	SSW to NNE	N/K	16-Nov, 03:31
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	4-6km E	Recorded	3	Explosion	Undetermined	N/K	15-Nov, 19:37
	4-6km E	Recorded	2	Projectile	NNW to SSE	N/K	15-Nov, 19:37
	2-4km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 21:56
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 22:08
	3-5km E	Recorded		Projectile	E to W, uncountable	N/K	15-Nov, 22:09
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km E	Recorded	3	Projectile	N to S	N/K	15-Nov, 21:52
	2-4km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 22:08
	2-4km E	Recorded	1	Projectile	N to S	N/K	15-Nov, 22:25
	1-3km ENE	Recorded	13	Projectile	N to S	N/K	15-Nov, 22:32
SMM camera at entry-exit checkpoint in Marinka (government-controlled, 23km SW of Donetsk)	3-5km NE	Recorded	1	Projectile	W to E	N/K	15-Nov, 19:39
	3-5km NE	Recorded	1	Projectile	W to E	N/K	15-Nov, 19:43
	3-5km NE	Recorded	1	Projectile	W to E	N/K	15-Nov, 19:47
SMM camera at entry-exit checkpoint in Pyshevyk (government-controlled, 84km S of Donetsk)	2-4km ESE	Recorded	1	Projectile	S to N	N/K	16-Nov, 00:28
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	2-7km N	Recorded	2	Explosion	Undetermined	N/K	15-Nov, 18:39
	2-7km N	Recorded	1	Projectile	W to E	N/K	15-Nov, 18:39
	2-7km N	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 19:32
	2-7km N	Recorded	4	Explosion	Undetermined	N/K	15-Nov, 19:37
	2-7km N	Recorded	2	Projectile	W to E	N/K	15-Nov, 19:37
	2-7km N	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 19:42
	2-7km N	Recorded	4	Explosion	Undetermined	N/K	15-Nov, 19:43
	2-7km N	Recorded	2	Projectile	SSE to NNW	N/K	15-Nov, 19:43
	3-5km NNE	Recorded	17	Projectile	E to W	N/K	15-Nov, 20:48
	2-4km N	Recorded	4	Projectile	E to W	N/K	15-Nov, 20:50
	2-4km N	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 20:52
	2-4km N	Recorded	15	Projectile	E to W	N/K	15-Nov, 20:52
	2-4km N	Recorded	4	Projectile	W to E	N/K	15-Nov, 20:54
	2-4km N	Recorded	3	Projectile	W to E	N/K	15-Nov, 21:06
	2-4km N	Recorded	1	Projectile	E to W	N/K	15-Nov, 21:26
2-4km N	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 21:26	

	2-4km N	Recorded	1	Explosion	Undetermined	N/K	15-Nov, 21:56
	2-4km N	Recorded	2	Explosion	Undetermined	N/K	15-Nov, 22:09
	2-4km N	Recorded	3	Projectile	E to W	N/K	15-Nov, 22:34
	3-5km N	Recorded	6	Projectile	E to W	N/K	15-Nov, 23:44
	3-5km N	Recorded	11	Projectile	E to W	N/K	16-Nov, 01:05
	2-4km NNE	Recorded	2	Projectile	E to W	N/K	16-Nov, 03:35
	2-4km NNE	Recorded	4	Projectile	E to W	N/K	16-Nov, 03:39
SE part of Avdiivka (government-controlled, 17km N of Donetsk)	2-3km SSE	Heard	10	Shot		Small arms	16-Nov, 09:07
	2-3km SSE	Heard	6	Burst		Small arms	16-Nov, 09:21-09:25
	2-3km SSE	Heard	10	Shot		HMG	16-Nov, 09:45
	2km SSE	Heard	10	Burst		HMG	16-Nov, 10:20-10:30
	2km SSE	Heard	6	Shot		IFV	16-Nov, 10:20-10:30
	2-3km SSE	Heard	10	Shot		HMG	16-Nov, 11:20
Krasnohorivka (government-controlled, 21km W of Donetsk)	2-3km NE	Heard		Shot	Uncountable, overlapping	HMG	16-Nov, 11:42-11:49
	2-3km E	Heard	8	Explosion	Undetermined	N/K	16-Nov, 11:42-11:49
	2-3km NE	Heard		Shot	Uncountable, overlapping	HMG	16-Nov, 11:49-11:52
1.8km N of Petrivske (non-government-controlled, 41km S of Donetsk)	1-2km SSW	Heard	5	Shot	Assessed as outside the disengagement area	Small arms	16-Nov, 10:36
2.8km SW of Vesele (non-government-controlled, 9km NW of Donetsk)	3-4km WSW	Heard	2	Explosion	Undetermined	N/K	16-Nov, 11:42-11:45
About 1km NW of the railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	2km WSW	Heard	5	Burst		Small arms	16-Nov, 09:05
	3-5km WSW	Heard	1	Explosion	Undetermined	N/K	16-Nov, 09:09
	2km WSW	Heard	3	Burst		Small arms	16-Nov, 09:20
	2km WSW	Heard	37	Burst		Small arms	16-Nov, 09:24-09:40
	2-3km WSW	Heard	6	Burst		HMG	16-Nov, 09:45
	2-3km WSW	Heard	4	Burst		HMG	16-Nov, 09:57
1km NNW of Pyshevyk (government-controlled, 25km NE of Mariupol)	N/K SSE	Heard	2	Explosion	Undetermined	N/K	16-Nov, 10:27
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-4km SSE	Heard	5	Burst		HMG	15-Nov, 19:00
	3-4km SSE	Heard	10	Burst		HMG	15-Nov, 19:30
	3-4km SSE	Heard	7	Explosion	Undetermined	N/K	15-Nov, 20:25-20:26
	3-4km SSE	Heard	10	Burst	Undetermined	N/K	15-Nov, 20:25-20:26
	4-5km SSE	Heard	15	Burst	Undetermined	N/K	15-Nov, 20:36-20:40
	3-4km SSE	Heard	3	Explosion	Undetermined	N/K	15-Nov, 20:39-20:41
	4-5km SE	Heard	25	Burst		HMG	15-Nov, 21:30-21:35
	4-5km SE	Heard	10	Explosion	Undetermined	N/K	15-Nov, 21:30-21:35

	3-4km SE	Heard	10	Burst		HMG	15-Nov, 22:05-22:07
	3-4km SE	Heard	6	Explosion	Undetermined	N/K	15-Nov, 22:05-22:07
	4-5km SE	Heard	27	Burst		HMG	15-Nov, 22:40-22:45
	4-5km SE	Heard	15	Explosion	Undetermined	N/K	15-Nov, 22:40-22:45
	4-5km SSE	Heard	10	Burst		HMG	15-Nov, 23:10-23:12
	4-5km SSE	Heard	7	Explosion	Undetermined	N/K	15-Nov, 23:10-23:12
	3-4km SSE	Heard	15	Burst		HMG	15-Nov, 23:30-23:33
	3-4km SSE	Heard	7	Explosion	Undetermined	N/K	15-Nov, 23:30-23:33
	3-4km SE	Heard	17	Burst		HMG	15-Nov, 23:40-23:45
	3-4km SE	Heard	5	Explosion	Undetermined	N/K	15-Nov, 23:40-23:45
	4-5km SE	Heard	20	Burst		HMG	15-Nov, 23:50-23:55
	4-5km SE	Heard	5	Explosion	Undetermined	N/K	15-Nov, 23:50-23:55
	3-4km SE	Heard	30	Burst		HMG	15-Nov, 23:57-00:00
	3-4km SE	Heard	15	Explosion		N/K	15-Nov, 23:57-00:00
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 07:42
	3-4km SSE	Heard	50	Burst		HMG	16-Nov, 14:50-15:00
	3-4km SSE	Heard	10	Explosion	Undetermined	N/K	16-Nov, 14:50-15:00
	4-5km SSE	Heard	5	Explosion	Undetermined	N/K	16-Nov, 15:57
	4-5km SSE	Heard	5	Explosion	Undetermined	N/K	16-Nov, 16:08
	4-5km SSE	Heard	10	Burst		HMG	16-Nov, 17:35
	4-5km SSE	Heard	2	Explosion	Undetermined	N/K	16-Nov, 17:35
	4-5km SE	Heard	10	Explosion	Undetermined	N/K	16-Nov, 18:00-18:15
	4-5km SE	Heard	15	Burst		HMG	16-Nov, 18:00-18:15
Horlivka (non-government-controlled, 39km NE of Donetsk)	2-3km WSW	Heard	3	Burst		Small arms	15-Nov, 19:44
	4-5km W	Heard	2	Explosion	Undetermined	N/K	16-Nov, 16:35
About 500m NE of Kamianka (government-controlled, 20km N of Donetsk)	2-4km SE	Heard	12	Burst		HMG	16-Nov, 09:05
	2-3km S	Heard	5	Shot		Small arms	16-Nov, 09:06
	3-4km S	Heard	3	Explosion	Undetermined	N/K	16-Nov, 09:08
	3-4km S	Heard	3	Explosion	Undetermined	N/K	16-Nov, 09:21
	2-3km SE	Heard	9	Burst		HMG	16-Nov, 09:24
	2-3km SE	Heard	22	Burst		HMG	16-Nov, 09:38
	2-3km SE	Heard	8	Burst		HMG	16-Nov, 09:47
	2-4km SE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 10:17
	2-3km SE	Heard	14	Burst		HMG	16-Nov, 10:20
	2-3km S	Heard	26	Burst		HMG	16-Nov, 10:24-10:25
	2-3km S	Heard	12	Burst		HMG	16-Nov, 10:59
	2-3km S	Heard	10	Burst		HMG	16-Nov, 11:19
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 11:29
	3-4km NE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 11:20

Pivnichne (government-controlled, 44km NE of Donetsk)	3-4km NE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 11:37
Kurdiumivka (government-controlled, 54km N of Donetsk)	3-4km SE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 11:20
	3-4km SE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 11:37
	3-4km SE	Heard	3	Explosion	Undetermined	N/K	16-Nov, 11:38
	3-4km SE	Heard	4	Explosion	Undetermined	N/K	16-Nov, 11:58
SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	15-Nov, 19:49
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:18
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:20
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:22
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:25
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:27
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:30
	2-4km SSW	Recorded	4	Projectile	WNW to ESE	N/K	16-Nov, 02:34
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 02:34
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	16-Nov, 02:35
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:37
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 02:39
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 02:40
	2-4km SSW	Recorded	7	Projectile	WNW to ESE	N/K	16-Nov, 02:40
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 02:41
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 02:42
	2-4km SSW	Recorded	4	Explosion	Undetermined	N/K	16-Nov, 02:43
	2-4km SSW	Recorded	5	Explosion	Undetermined	N/K	16-Nov, 02:44
	2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 02:45
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 02:47
2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 02:48	
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-4km E	Recorded	3	Projectile	NNW to SSE (assessed as outside the disengagement area)	N/K	15-Nov, 20:39
N edge of Popasna (government-controlled, 69km W of Luhansk)	5-7km SE	Heard	38	Shot and burst	Assessed as outside the Zolote disengagement area	HMG	15-Nov, 20:47-22:16
	8-10km NE	Heard	5	Explosion	Undetermined	N/K	15-Nov, 20:47-22:16
	5-7km SE	Heard	39	Burst	Assessed as outside the Zolote disengagement area	HMG	15-Nov, 20:47-22:16
	5-7km SE	Heard	10	Shot and burst	Assessed as outside the Zolote disengagement area	HMG	15-Nov, 20:47-22:16
	5-7km SE	Heard	13	Explosion	Undetermined (assessed as outside the Zolote disengagement area)	N/K	15-Nov, 20:47-22:16
	5-7km SE	Heard	12	Shot	Assessed as outside the Zolote disengagement area	N/K	15-Nov, 20:47-22:16



E edge of Popasna (government-controlled, 69km W of Luhansk)	2-3km W	Heard	4	Explosion	Outgoing	N/K	16-Nov, 13:46-13:53
Kadiivka (formerly Stakhanov, non-government-controlled, 50km W of Luhansk)	10-17km SW	Heard	14	Explosion	Undetermined	N/K	15-Nov, 22:12-23:40
	1km WSW	Heard	4	Shot		Small arms	15-Nov, 22:12-23:40
	10-17km SW	Heard	3	Explosion	Undetermined	N/K	15-Nov, 22:12-23:40
	10-17km SW	Heard	7	Explosion	Undetermined	N/K	16-Nov, 00:19-02:33
	10-17km SW	Heard	2	Explosion	Undetermined	N/K	16-Nov, 00:19-02:33
	10-17km SW	Heard	2	Explosion	Undetermined	N/K	16-Nov, 00:19-02:33
1km N of Kalynove-Borshchuvate (non-government-controlled, 23km SW of Luhansk)	2-4km NW	Heard	4	Explosion	Undetermined (assessed as outside the Zolote disengagement area)	N/K	16-Nov, 13:44-13:51
	2-4km NNW	Heard	2	Burst	Assessed as outside the Zolote disengagement area	Small arms	16-Nov, 13:44-13:51
1.7km SW of Molodizhne (non-government-controlled, 63km NW of Luhansk)	2-4km NNE	Heard	1	Explosion	Undetermined (assessed as outside the Zolote disengagement area)	N/K	16-Nov, 14:04
W edge of Pervomaisk (non-government-controlled, 58km W of Luhansk)	2-4km WSW	Heard	4	Shot		Small arms	16-Nov, 14:40-15:00
	2-4km WSW	Heard	5	Burst		Small arms	16-Nov, 14:40-15:03
	2-4km WSW	Heard	1	Explosion	Undetermined	N/K	16-Nov, 14:40
	10-12km SW	Heard	1	Explosion	Undetermined	N/K	16-Nov, 14:46
SMM camera in Avdiivka (government-controlled, 17km N of Donetsk)	3-5km SE	Recorded	1	Illumination flare	NNW to SSE	N/K	16-Nov, 18:28
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	2-7km SE	Recorded	6	Projectile	WSW to ENE	N/K	16-Nov, 18:12
	2-7km SE	Recorded	5	Projectile	ENE to WSW	N/K	16-Nov, 18:12
	2-7km SE	Recorded	2	Projectile	ENE to WSW	N/K	16-Nov, 18:14
	2-7km SE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 18:41
	2-7km SE	Recorded	1	Projectile	WSW to ENE	N/K	16-Nov, 18:42
	2-7km SE	Recorded	3	Projectile	ENE to WSW	N/K	16-Nov, 18:43
	2-7km SE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 18:46
	2-7km SE	Recorded	1	Projectile	ENE to WSW	N/K	16-Nov, 18:54
	2-7km SE	Recorded	8	Projectile	ENE to WSW	N/K	16-Nov, 18:56
	2-7km SE	Recorded	4	Projectile	ENE to WSW	N/K	16-Nov, 18:57
	2-7km SE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 19:06
	2-7km SE	Recorded	4	Muzzle flash		N/K	16-Nov, 19:07
	2-7km SE	Recorded	2	Projectile	WNW to ESE	N/K	16-Nov, 19:07
	2-7km SE	Recorded	6	Projectile	WSW to ENE	N/K	16-Nov, 19:10
	2-7km SE	Recorded	1	Muzzle flash		N/K	16-Nov, 19:10
	2-7km SE	Recorded	9	Projectile	ENE to WSW	N/K	16-Nov, 19:15
	2-7km SE	Recorded	13	Projectile	ENE to WSW	N/K	16-Nov, 19:16
	2-7km SE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 19:17

	2-7km SE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 19:18
	2-7km SE	Recorded	1	Projectile	NNE to SSW	N/K	16-Nov, 19:18
	2-7km SE	Recorded	2	Projectile	WSW to ENE	N/K	16-Nov, 19:37
	2-7km SE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 19:37
	2-7km SE	Recorded	1	Projectile	ENE to WSW	N/K	16-Nov, 19:38
	2-7km SE	Recorded	1	Projectile	WSW to ENE	N/K	16-Nov, 19:39
	2-7km SE	Recorded	1	Projectile	WSW to ENE	N/K	16-Nov, 19:41
	2-7km SE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 19:41
	3-5km SE	Recorded	6	Projectile	NE to SW	N/K	16-Nov, 20:43
	3-5km SE	Recorded	2	Projectile	NE to SW	N/K	16-Nov, 20:44
	3-5km SE	Recorded	2	Projectile	NE to SW	N/K	16-Nov, 20:45
	3-5km SE	Recorded	7	Projectile	NE to SW	N/K	16-Nov, 20:46
	3-5km SE	Recorded	14	Projectile	NE to SW	N/K	16-Nov, 20:47
	3-5km SE	Recorded	12	Projectile	NE to SW	N/K	16-Nov, 20:50
	3-5km SE	Recorded	6	Projectile	NE to SW	N/K	16-Nov, 20:51
	3-5km SE	Recorded	5	Projectile	NE to SW	N/K	16-Nov, 20:52
	3-5km SSE	Recorded	1	Projectile	NE to SW	N/K	16-Nov, 20:58
	3-5km SE	Recorded	5	Projectile	NE to SW	N/K	16-Nov, 20:59
	3-5km SE	Recorded	18	Projectile	NE to SW	N/K	16-Nov, 21:00
	3-5km SE	Recorded	3	Projectile	NE to SW	N/K	16-Nov, 21:01
	3-5km SE	Recorded	3	Projectile	NE to SW	N/K	16-Nov, 21:02
	3-5km SE	Recorded	24	Projectile	NE to SW	N/K	16-Nov, 21:04
	3-5km SE	Recorded	5	Projectile	NE to SW	N/K	16-Nov, 21:05
	3-5km SE	Recorded	10	Projectile	NE to SW	N/K	16-Nov, 21:06
	3-5km SE	Recorded	1	Projectile	NE to SW	N/K	16-Nov, 21:07
	3-5km SE	Recorded	1	Projectile	SW to NE	N/K	16-Nov, 21:11
	3-5km SSE	Recorded	1	Projectile	SW to NE	N/K	16-Nov, 21:15
	3-5km SE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 21:15
	3-5km SE	Recorded	1	Projectile	NE to SW	N/K	16-Nov, 21:18
	3-5km SE	Recorded	5	Projectile	NE to SW	N/K	16-Nov, 21:21
	3-5km SE	Recorded	4	Projectile	NE to SW	N/K	16-Nov, 21:22
	3-5km SE	Recorded	2	Projectile	NE to SW	N/K	16-Nov, 21:23
	3-5km SE	Recorded	12	Projectile	NE to SW	N/K	16-Nov, 21:26
	3-5km SE	Recorded	2	Muzzle flash	Undetermined	N/K	16-Nov, 21:26
	3-5km SE	Recorded	6	Projectile	NE to SW	N/K	16-Nov, 21:27
	3-5km SE	Recorded	8	Projectile	In vertical flight	N/K	17-Nov, 17:37
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	0.7-2km S	Recorded	10	Projectile	E to W	N/K	16-Nov, 17:21
	0.7-2km S	Recorded	19	Explosion	Undetermined	N/K	16-Nov, 17:34
	0.7-2km SSW	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 17:35
	0.7-2km S	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 18:23
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 21:11
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	16-Nov, 21:26
	1-2km SSW	Recorded	1	Projectile	In vertical flight	N/K	16-Nov, 21:33
	1-2km S	Recorded	2	Muzzle flash		N/K	16-Nov, 23:55
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 05:17
	1-2km SSE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 05:17
	1-2km SSW	Recorded	8	Explosion	Undetermined	N/K	17-Nov, 05:43
	1-2km SSE	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 05:43
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	2-4km E	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 18:23
	2-4km E	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 18:32
	2-4km E	Recorded	4	Projectile	N to S	N/K	16-Nov, 18:32
	2-4km E	Recorded	4	Projectile	N to S	N/K	16-Nov, 18:40
	2-4km E	Recorded	4	Projectile	SSW to NNE	N/K	16-Nov, 18:40
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 18:48
	2-4km E	Recorded	4	Projectile	SSW to NNE	N/K	16-Nov, 18:54
	2-4km E	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 18:54
	2-4km E	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 18:55
	2-4km E	Recorded	2	Projectile	SSW to NNE	N/K	16-Nov, 18:55

	2-4km E	Recorded	1	Projectile	NNE to SSW	N/K	16-Nov, 18:55
	2-4km E	Recorded	5	Projectile	SSW to NNE	N/K	16-Nov, 18:56
	2-4km E	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 18:56
	2-4km E	Recorded	2	Projectile	NNE to SSW	N/K	16-Nov, 18:56
	2-4km E	Recorded	6	Explosion	Undetermined	N/K	16-Nov, 19:10
	2-4km ESE	Recorded	1	Projectile	SSW to NNE	N/K	16-Nov, 19:25
	2-4km SE	Recorded	8	Projectile	SSW to NNE	N/K	16-Nov, 19:28
	2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 19:28
	3-5km E	Recorded	8	Projectile	NNE to SSW	N/K	16-Nov, 20:00
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 20:00
	3-5km E	Recorded	1	Projectile	NNE to SSW	N/K	16-Nov, 20:01
	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 20:02
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 20:14
	3-5km E	Recorded	5	Explosion	Undetermined	N/K	16-Nov, 20:28
	3-5km E	Recorded	5	Projectile	NNE to SSW	N/K	16-Nov, 20:30
	3-5km ESE	Recorded	4	Projectile	SSW to NNE	N/K	16-Nov, 20:31
	3-5km ESE	Recorded	5	Projectile	SSW to NNE	N/K	16-Nov, 20:32
	3-5km E	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 20:35
	3-5km ESE	Recorded	6	Projectile	SSW to NNE	N/K	16-Nov, 21:21
	3-5km E	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 21:43
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	16-Nov, 21:59
	3-5km ESE	Recorded	7	Projectile	SSW to NNE	N/K	16-Nov, 22:00
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 22:07
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 00:00
	2-4km SE	Recorded	6	Projectile	SSW to NNE	N/K	17-Nov, 00:52
	2-4km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 01:06
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	17-Nov, 01:14
	2-4km SE	Recorded	9	Projectile	NNE to SSW	N/K	17-Nov, 01:15
	2-4km ESE	Recorded	4	Projectile	SSW to NNE	N/K	17-Nov, 01:52
	3-5km E	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 02:16
	3-5km ESE	Recorded	7	Projectile	SSW to NNE	N/K	17-Nov, 02:21
	3-5km ESE	Recorded	2	Projectile	SSW to NNE	N/K	17-Nov, 02:37
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 02:40
	3-5km ESE	Recorded	3	Projectile	SSW to NNE	N/K	17-Nov, 02:50
	3-5km ESE	Recorded	8	Projectile	WSW to ENE	N/K	17-Nov, 03:04
	3-5km ESE	Recorded	8	Projectile	SSW to NNE	N/K	17-Nov, 03:43
	3-5km ESE	Recorded	4	Projectile	SSW to NNE	N/K	17-Nov, 03:51
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 03:53
	2-4km ESE	Recorded	7	Projectile	WSW to ENE	N/K	17-Nov, 05:01
	3-5km SE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 05:19
	2-4km ESE	Recorded	2	Projectile	SSW to NNE	N/K	17-Nov, 05:23
	2-4km ESE	Recorded	17	Projectile	SSW to NNE	N/K	17-Nov, 05:25
	3-5km ESE	Recorded	14	Projectile	SSW to NNE	N/K	17-Nov, 17:16
	3-5km ESE	Recorded	10	Projectile	SSW to NNE	N/K	17-Nov, 17:23
	3-5km ESE	Recorded	1	Projectile	SSW to NNE	N/K	17-Nov, 18:12
	3-5km ESE	Recorded	4	Projectile	SSW to NNE	N/K	17-Nov, 18:13
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	2-4km E	Recorded	1	Projectile	S to N	N/K	16-Nov, 18:23
	2-4km E	Recorded	1	Explosion	In air	N/K	16-Nov, 18:23
	2-4km	Recorded	1	Projectile	NW to SE	N/K	16-Nov, 18:29
	2-4km E	Recorded	2	Projectile	S to N	N/K	16-Nov, 18:32
	2-5km E	Recorded	1	Projectile	W to E	N/K	16-Nov, 18:32
	2-4km E	Recorded	1	Muzzle flash		N/K	16-Nov, 18:34
	2-4km E	Recorded	7	Projectile	S to N	N/K	16-Nov, 18:40
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	16-Nov, 18:41
	2-4km E	Recorded	3	Projectile	S to N	N/K	16-Nov, 18:54
	2-4km E	Recorded	1	Muzzle flash		N/K	16-Nov, 18:54
	2-4km E	Recorded	4	Projectile	S to N	N/K	16-Nov, 18:55
	2-4km E	Recorded	7	Projectile	S to N	N/K	16-Nov, 18:56

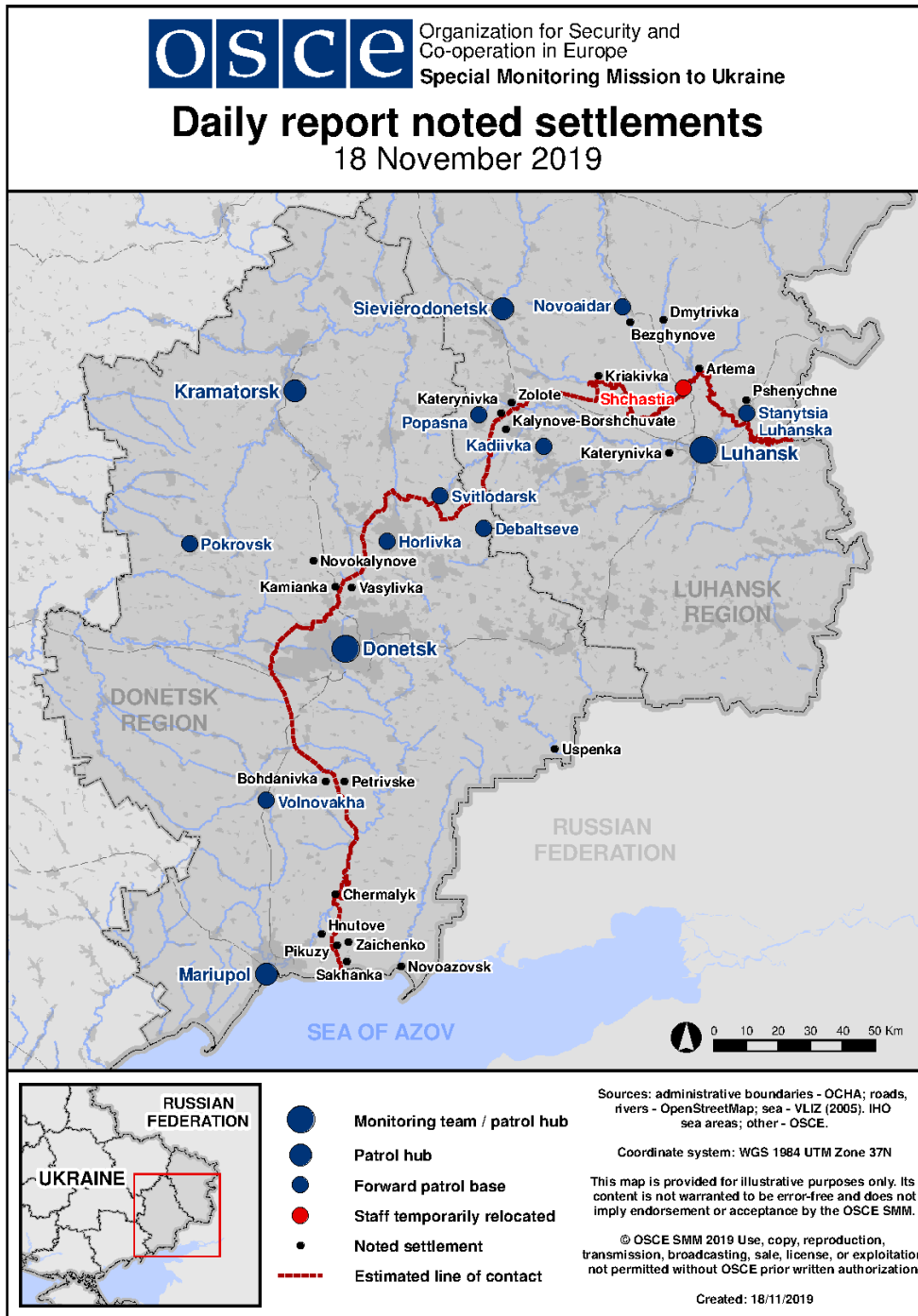
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	16-Nov, 19:07
	2-4km ENE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 19:36
	2-4km ENE	Recorded	1	Projectile	WNW to ESE	N/K	16-Nov, 19:37
	2-4km ENE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 19:37
SMM camera at entry-exit checkpoint in Marinka (government-controlled, 23km SW of Donetsk)	2-4km NNE	Recorded	2	Projectile	SE to NW	N/K	16-Nov, 16:57
	2-4km NNE	Recorded	2	Projectile	In vertical flight	N/K	16-Nov, 16:57
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	2-7km N	Recorded	8	Projectile	E to W	N/K	16-Nov, 16:54
	2-7km N	Recorded	2	Projectile	W to E	N/K	16-Nov, 18:19
	2-7km N	Recorded	1	Illumination flare	In vertical flight	N/K	16-Nov, 18:40
	2-7km N	Recorded	4	Projectile	E to W	N/K	16-Nov, 18:40
	2-7km N	Recorded	2	Projectile	E to W	N/K	16-Nov, 18:54
	2-7km N	Recorded	2	Projectile	E to W	N/K	16-Nov, 18:55
	2-7km N	Recorded	4	Projectile	E to W	N/K	16-Nov, 18:56
	2-7km N	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 19:18
	2-7km N	Recorded	1	Projectile	E to W	N/K	16-Nov, 19:18
	2-7km N	Recorded	3	Explosion	Undetermined	N/K	16-Nov, 19:37
	2-4km N	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 21:14
	2-4km N	Recorded	1	Projectile	W to E	N/K	16-Nov, 21:14
	2-4km N	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 21:15
	2-4km N	Recorded	1	Projectile	W to E	N/K	16-Nov, 21:15
	2-4km N	Recorded	16	Projectile	E to W	N/K	16-Nov, 21:22
	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	16-Nov, 21:35
	3-5km N	Recorded	2	Projectile	E to W	N/K	16-Nov, 21:48
	3-5km N	Recorded	3	Projectile	SW to NE	N/K	16-Nov, 21:50
	3-5km N	Recorded	11	Projectile	E to W	N/K	16-Nov, 21:57
	3-5km N	Recorded	2	Projectile	E to W	N/K	16-Nov, 22:03
	3-5km N	Recorded	6	Projectile	SW to NE	N/K	16-Nov, 22:04
	3-5km N	Recorded	2	Explosion	Undetermined	N/K	16-Nov, 22:07
	3-5km N	Recorded	1	Projectile	ESE to WNW	N/K	16-Nov, 22:17
	3-5km N	Recorded	5	Projectile	SW to NE	N/K	16-Nov, 23:26
	3-5km N	Recorded	2	Projectile	E to W	N/K	16-Nov, 23:40
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	16-Nov, 23:40
	2-4km N	Recorded	6	Projectile	SW to NE (in vertical flight)	N/K	17-Nov, 02:21
	3-6km N	Recorded	1	Explosion	Undetermined	N/K	17-Nov, 18:03
2-6km N	Recorded	6	Projectile	E to W	N/K	17-Nov, 18:16	
About 700m ESE of Kruta Balka (non-government-controlled, 16km N of Donetsk)	3-4km NW	Heard	12	Burst		HMG	17-Nov, 10:51-11:05
About 1km NW of the railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	2-3km N	Heard	2	Shot		Small arms	17-Nov, 12:17
	5-6km NW	Heard	2	Explosion	Undetermined	N/K	17-Nov, 12:20
	2km SE	Heard	2	Shot		Small arms	17-Nov, 13:00
Staromykhailivka (non-government-controlled, 15km W of Donetsk)	0.8-1km W	Heard and saw	8	Shot	Undetermined	IFV	17-Nov, 11:24-11:26
Krasnohorivka (government-controlled, 21km W of Donetsk)	1km E	Heard	8	Burst		Cannon (30mm)	17-Nov, 11:23-11:45
	1km E	Heard	14	Burst		HMG	17-Nov, 11:23-11:45

	1km E	Heard	5	Explosion	Undetermined	N/K	17-Nov, 11:23-11:45
	1km E	Heard	11	Explosion	Undetermined	AGL	17-Nov, 11:23-11:45
SE edge of Avdiivka (government-controlled, 17km N of Donetsk)	3-4km SE	Heard	5	Explosion	Undetermined	N/K	17-Nov, 09:50
1.3km NE of Bohdanivka (government-controlled, 41km SW of Donetsk)	2-3km NNE	Heard	28	Shot	Assessed as outside the Petrivske disengagement area	Small arms	17-Nov, 12:29-12:38
About 1km NE of Kulykove (non-government-controlled, 87km S of Donetsk)	2-3km W	Heard	2	Explosion	Undetermined	N/K	17-Nov, 13:13
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-4km SSE	Heard	10	Burst		HMG	16-Nov, 20:34-20:36
	3-4km SE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 20:36
	3-4km SE	Heard	2	Explosion	Undetermined	N/K	16-Nov, 20:38
	3-4km SE	Heard	15	Burst		HMG	16-Nov, 20:38-20:40
	3-4km SE	Heard	5	Explosion	Undetermined	N/K	16-Nov, 21:05
	4-5km SW	Heard	10	Burst		HMG	16-Nov, 21:10
	3-4km SE	Heard	5	Burst		HMG	16-Nov, 22:11
	3-4km SE	Heard	2	Burst		HMG	16-Nov, 22:43
	3-4km SE	Heard	3	Explosion	Undetermined	N/K	16-Nov, 22:52
	3-4km SE	Heard	1	Explosion	Undetermined	N/K	16-Nov, 23:17
	3-4km SE	Heard	5	Explosion	Undetermined	N/K	16-Nov, 23:30-23:35
	3-4km SE	Heard	5	Burst		HMG	16-Nov, 23:30-23:35
	3-4km SE	Heard	2	Explosion	Undetermined	N/K	16-Nov, 23:40
	3-4km SE	Heard	6	Explosion	Undetermined	N/K	16-Nov, 23:45-23:47
	3-4km SE	Heard	3	Explosion	Undetermined	N/K	16-Nov, 23:50
	3-4km SE	Heard	2	burst		HMG	16-Nov, 23:51
	3-4km SE	Heard	2	Explosion	Undetermined	N/K	17-Nov, 10:37
	3-4km SE	Heard	1	Explosion	Undetermined	N/K	17-Nov, 14:40
	3-4km SE	Heard	25	Burst		HMG	17-Nov, 14:42-14:45
	3-4km SE	Heard	8	Explosion	Undetermined	N/K	17-Nov, 14:50
6-7km SE	Heard	43	Explosion	Undetermined	N/K	17-Nov, 15:02-15:07	
3-5km NE	Heard	42	Burst		HMG	17-Nov, 15:16-15:21	
Horlivka (non-government-controlled, 39km NE of Donetsk)	4-5km W	Heard	23	Explosion	Undetermined	N/K	17-Nov, 14:35-14:38
	4-5km W	Heard	45	Explosion	Undetermined	N/K	17-Nov, 14:40
	4-5km W	Heard	38	Burst		HMG	17-Nov, 14:48-15:00
	4-5km W	Heard	27	Explosion	Undetermined	N/K	17-Nov, 15:02-15:10
	4-5km W	Heard	31	Burst		HMG	17-Nov, 15:12-15:15
	1-3km SW	Heard	21	Burst		Small arms	17-Nov, 16:32
Tarasivka (government-	4-6km S	Heard	2	Explosion	Undetermined	N/K	17-Nov, 11:45

controlled, 43km NW of Donetsk)							
SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	2-4km SW	Recorded	7	Projectile	WNW to ESE	N/K	16-Nov, 21:10
	2-4km SW	Recorded	3	Projectile	WNW to ESE	N/K	16-Nov, 21:11
N edge of Popasna (government-controlled, 69km W of Luhansk)	3-4km E	Heard	2	Burst	Assessed as outside the Zolote disengagement area	HMG	16-Nov, 18:12-18:22
	3-4km E	Heard	5	Shot	Assessed as outside the Zolote disengagement area	IFV	16-Nov, 18:12-18:22
SE outskirts of Popasna (government-controlled, 69km W of Luhansk)	3-4km SE	Heard	71	Explosion	Undetermined	N/K	17-Nov, 13:33-13:45
S edge of disengagement area near Zolote (government-controlled, 60km W of Luhansk)	2-4km ESE	Heard	7	Shot	Assessed as outside the disengagement area	Small arms	17-Nov, 10:24-10:35
	4-6km SW	Heard	4	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	17-Nov, 12:11-12:17
Zolote-3/ Stakhanovets (government-controlled, 61km NW of Luhansk)	2-3km SSE	Heard	2	Explosion	Undetermined (unable to assess whether inside or outside the Zolote disengagement area)	N/K	17-Nov, 12:11-12:13
Zolote-1/ Soniachnyi (government-controlled, 61km NW of Luhansk)	4-5km SSW	Heard	2	Explosion	Undetermined (assessed as outside the Zolote disengagement area)	N/K	17-Nov, 13:27-13:28
600m NW of Kalynove-Borshchuvate (non-government-controlled, 61km W of Luhansk)	1.5-2km S	Heard	97	Explosion	Undetermined	N/K	17-Nov, 13:35-13:52



Map of Donetsk and Luhansk regions<sup>10</sup>



<sup>10</sup> The SMM is deployed to ten locations throughout Ukraine – Kherson, Odessa, Lviv, Ivano-Frankivsk, Kharkiv, Donetsk, Dnipro, Chernivtsi, Luhansk and Kyiv – as per Permanent Council Decision 1117 of 21 March 2014. This map of eastern Ukraine is meant for illustrative purposes and indicates locations mentioned in the report, as well as those where the SMM has offices (monitoring teams, patrol hubs, and forward patrol bases) in Donetsk and Luhansk regions. (In red: a forward patrol base from which SMM staff has temporarily relocated based on recommendations of security experts from participating States as well as SMM security considerations. The SMM uses the premises during daylight hours and patrols in this settlement during daylight hours, as well).