Title of Investigation:	Investigation Number:	Report Number:
Limassol Fire	IRT 25-16 #44	

ORIGIN AND CAUSE REPORT

SUMMARY OF EVENT:

Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) – International Response Team (IRT) Activation – Certified Fire Investigator (CFI) origin and cause determination. IRT #44 and NRT #25-16.

OVERALL INCIDENT INFORMATION:

1. On Wednesday, 23 July 2025, at approximately 1326 hours, a fire was reported north of the village of Malia. The fire originated along the edge of the road that ran between the villages of Malia and Arsos and burned approximately 25,000 acres or 10,117 hectares. The fire has been identified as the Limassol Fire by investigators for purposes of this report. The fire has also been referred to as the Malia Fire by other sources and for clarification purposes, the Limassol Fire and the Malia Fire are the same event. The Limassol Fire resulted in two (2) fatalities and damaged the following according to the Cyprus Ministry of the Interior:

    - Homes – 224 completely burned, 308 partially burned = 532 total
    - Warehouse – 83 completely burned, 30 partially burned = 113 total
    - Workshop/Business – 15 completely burned, 14 partially burned = 29 total
    - Other – 17 completely burned, 18 partially burned = 35 total
    - Vehicles – 300 vehicles have been damaged or destroyed

2. On 4 August 2025, the ATF International Response Team (IRT) was activated to Cyprus to assist the Republic of Cyprus with the investigation into the Limassol Fire. On 7 August 2025, members of the IRT met with representatives from the U.S. Embassy – Cyprus and the officials from the Republic of Cyprus, at which time a briefing was conducted outlining the response to the fire and the investigation to date. The IRT conducted a fire scene examination from 7 August 2025 – 11 August 2025.

3. This fire is also on record with the following agencies: Cyprus Police, Cyprus Fire Service, Cyprus Civil Defence, and the Cyprus Department of Forests.

EVACUATION INFORMATION:

4. Once the fire was discovered and authorities were notified, various governmental agencies began the process of initiating evacuations. Investigators were provided with a list of evacuation orders that showed the date and time of the orders. The first orders were given for the Malia area and additional evacuation orders were made as the fire continued to grow.

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Evacuation Order	Community Name	Date	Time	Issued By
1	Malia	7/23/2025	14:00	Civil Defense
2	Vasa Koilaniou	7/23/2025	15:00	Fire Service
			15:10	Civil Defense
3	Potamiou	7/23/2025	16:30	Both
4	Vouni	7/23/2025	17:20	Civil Defense
5	Koilani	7/23/2025	17:48	Civil Defense
			18:20	Fire Service
6	Pera Pedi	7/23/2025	18:20	Fire Service
			20:50	Civil Defense
7	Agios Therapon	7/23/2025	19:20	Civil Defense
8	Lofou	7/23/2025	19:36	Both
9	Silikou	7/23/2025	20:10	Civil Defense
10	Souni-Zanakia	7/23/2025	20:40	Civil Defense
11	Alassa	7/23/2025	20:52	Civil Defense
12	Agios Amvrosios	7/23/2025	21:00	Both
13	Kivides	7/23/2025	21:00	Both
14	Vounatos	7/24/2025	0:07	Fire Service
15	Pachna	7/24/2025	2:27	Civil Defense
16	Arsos	7/24/2025	2:27	Civil Defense
17	Omodos	7/24/2025	14:35	Civil Defense

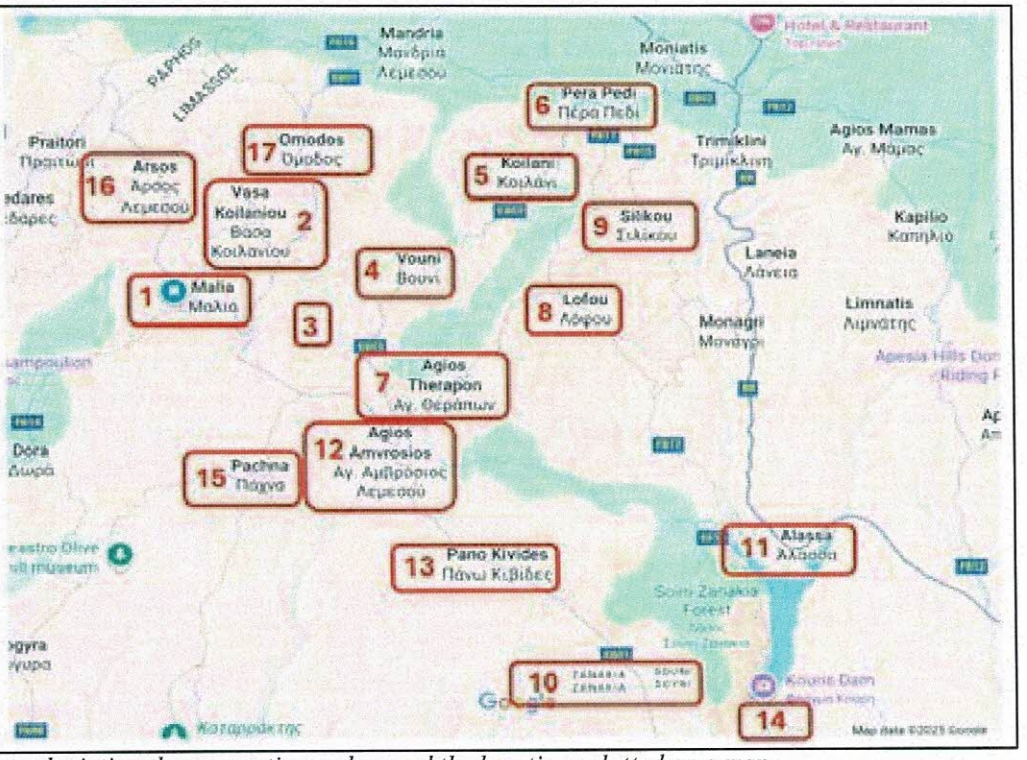

Figure 1: Diagram depicting the evacuation orders and the locations plotted on a map

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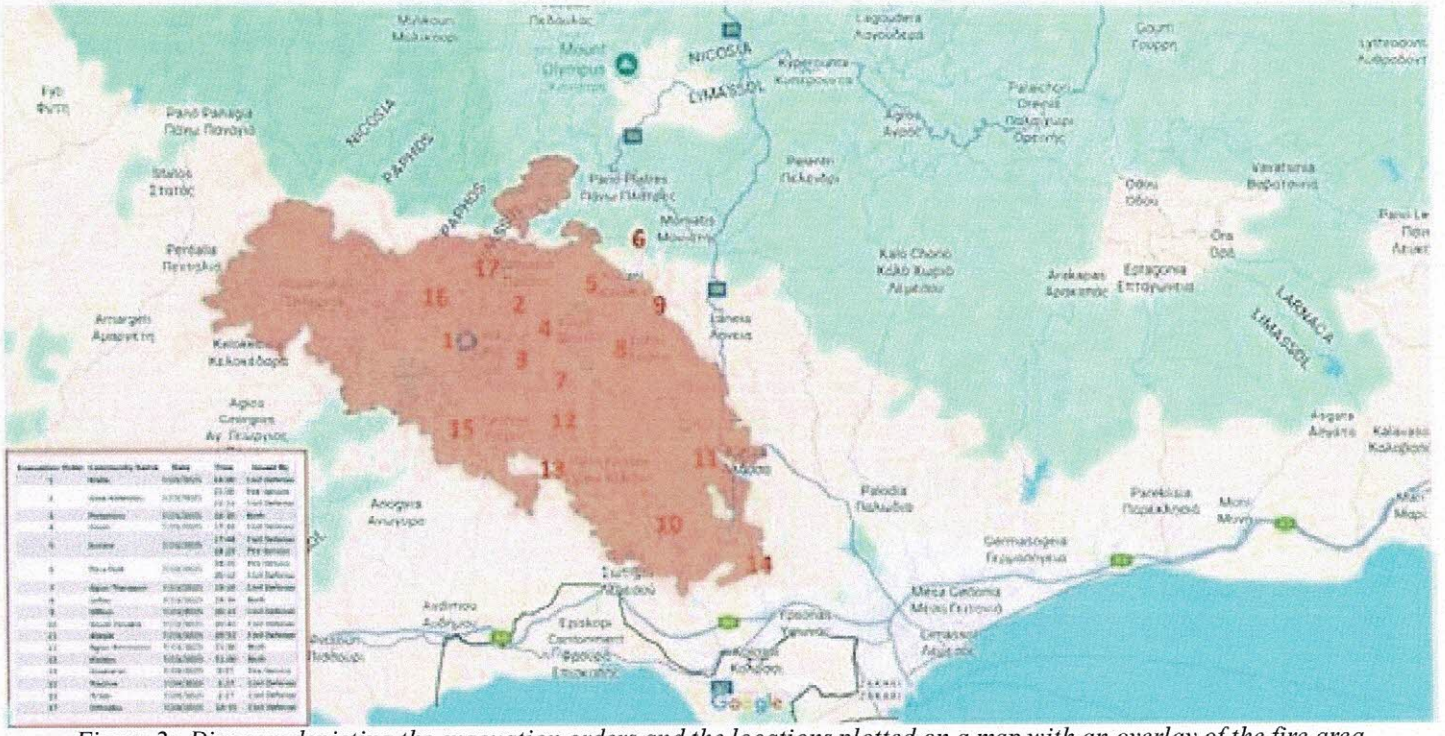

Figure 2: Diagram depicting the evacuation orders and the locations plotted on a map with an overlay of the fire area.

SCOPE OF INVESTIGATION:

5. This report relates to the origin and cause determination of the wildfire that originated within the Limassol District near the village of Malia on 23 July 2025. The Scientific Method was utilized during this fire investigation, as recommended by the 2024 Edition of NFPA 921 Guide for Fire & Explosion Investigations, which defines the Scientific Method as:

   "The systematic pursuit of knowledge involving the recognition and definition of a problem; the collection of data through observation and experimentation; analysis of the data; the formulation, evaluation and testing of hypotheses; and, where possible, the selection of a final hypothesis."

6. Specifically, investigators gathered available information (data) related to the fire/explosion event; and based on that data, investigators attempted to develop and test all reasonable hypotheses as to where and how the fire could have started. When all reasonable hypotheses had been vetted against known data, a conclusion was drawn.

7. For purposes of this report, investigators referenced both the 2024 Edition of NFPA 921 – Guide for Fire and Explosion Investigation, and the 2025 Edition of the National Wildfire Coordinating Group (NWCG) – Guide to Wildland Fire Origin and Cause Determination. Portions of each document were utilized to aid investigators in their analysis of these events.

8. The following excerpts were taken from the 2025 Edition of the National Wildfire Coordinating Group (NWCG) – Guide to Wildland Fire Origin and Cause Determination, pages 83 – 84:

Areas of the Fire

Even with large areas, there is a systematic method for identifying the ignition area. Fire behavior is influenced by weather, fuels, and topography – referred to as the fire behavior context. As a fire moves over an area, it leaves distinct fire patterns composed of individual fire pattern indicators that will show the fire's progression.

The investigative area of a wildfire is broken down into the following components: general origin area, specific origin area, and ignition area.

***General origin area** is the larger area where the fire first established itself. It is identified by an analysis of the fire behavior context, macroscale fire pattern indicators, and witness statements. The general origin area includes within its boundary the specific origin area and ignition area and is typically less than one-half acre in size.*

***Specific origin area (SOA)** is the smaller area within the general origin area where the fire's direction of spread was first influenced by wind, fuel, or slope. The specific origin area is where the transition zone between advancing and backing indicators comes together with the lateral indicators on the flanks and will contain the ignition area. This area is characterized by subtle and microscale fire pattern indicators because of less-intense burning associated with the initial stages of the fire. The specific origin area varies in size and depends on the indicators and other factors.*

***Ignition area** is the smallest area that an investigator can define based on the physical evidence of the fire pattern indicators. This area within the specific origin area is where a competent ignition source came into contact with the first fuel ignited and combustion was sustained.*

***Point of origin** is the exact physical location within the ignition area where a heat source and the local fuel interact, resulting in a fire. The "exact" location of a point of origin is rarely found because from the time a fire is ignited to the time an investigator arrives at the specific origin area decomposition of the fuels and other physical makeup of the scene likely have altered or destroyed portions of it, particularly on the microscale.*

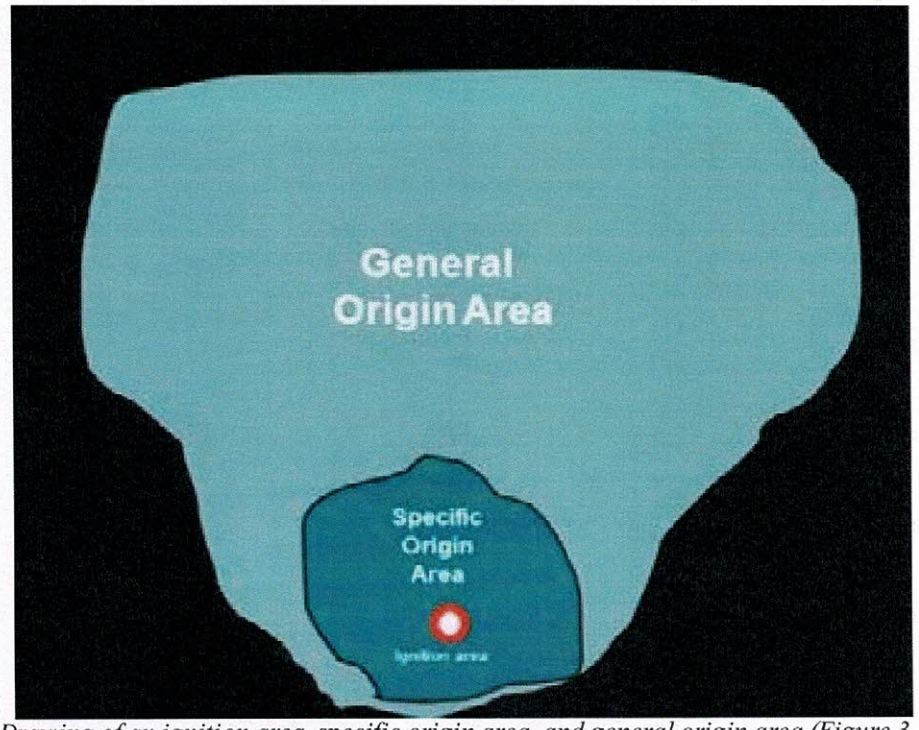

Figure 3: Drawing of an ignition area, specific origin area, and general origin area (Figure 3.2 PMS-412)

9. Investigators relied on their overall observations of the scene obtained during the scene examination, and utilized data in the form of witness statements, witness photos, timeline analysis, weather data, and an ATF Electrical Engineer (EE) examination. These processes formed the basis for the conclusions in this report.

LAND DESCRIPTION:

10. The Limassol Fire originated to the north of the village of Malia, within the District of Limassol. The fire occurred in a Wildland and Urban Interface (WUI) area consisting of agricultural properties, rural homes, and rural villages within the Troodos Mountains of Cyprus. Evidence of agrarian terrace farming dominated the landscape where the fire occurred.

11. Dr. Maria Prodromou of the Eratostheni Centre of Excellence of CUT Limassol provided a detailed mapping of the area burned by the Limassol Fire, which was carried out with a high-resolution satellite image, and amounted to approximately 104 square kilometers. Based on the project's data, the percentages of the total burned area of land are as follows:

- Approximately 50% concerns grassland (Approximately 52 sq. km)
- 31% sclerophyll vegetation (Approximately 32.24 sq. km)
- 16% tree vegetation (Approximately 16.64 sq. km)
- 1.3% corresponds to residential areas (Approximately 1352 sq. km)

12. Overall, the total area affected by fire corresponds to approximately 1.3% of the island's total area.

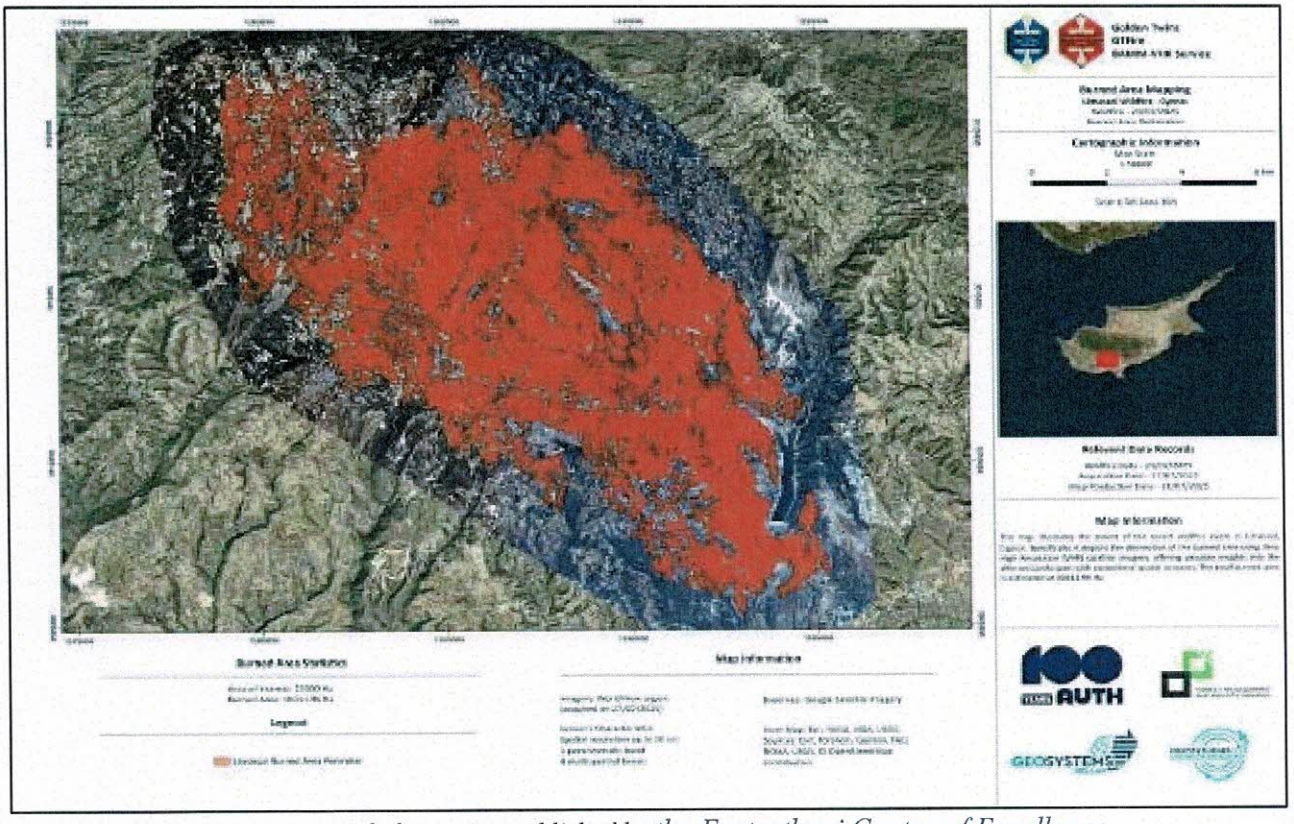

Figure 4: Detailed mapping published by the Eratostheni Centre of Excellence

FUELS IDENTIFICATION AND ANALYSIS:

13. The rugged terrain involved in the Limassol Fire is dominated by Maquis, Phrygana, and grasses. In the lower parts of the Troodos Mountains, near Malia, Maquis is a form of vegetation that is prevalent to the area. Maquis vegetation consists mostly of shrubs and does not grow higher than 3 – 5 meters. Several different species of shrubs and small-sized trees make up the Maquis in this area.

14. Phrygana is another type of vegetation, which can often be found around Malia. Phrygana does not rise higher than about a half a meter and consists of small shrubs and herbaceous plants. Grasses of varying heights were also prevalent around the area.

15. The fire danger in Cyprus is exacerbated by the Mediterranean climate of the island with a prolonged hot and dry summer coupled with strong winds, the density and fuel moisture content of the vegetation, and the topography of the area including steep slopes.

16. According to the European Drought Observatory of the Copernicus Emergency Management Service (CEMS), at the time of the Limassol Fire, the Eastern Mediterranean basin was affected by a prolonged drought. This finding was based in part on the reduction of the volume of water available in the Asprokremmos Reservoir, an important freshwater source for agriculture and local communities near Nikokleia in southwestern Cyprus. This finding was also based on a comparison of Copernicus Sentinel-2 imagery from June 2024 to June 2025. At the time of the fire the Asprokremmos Reservoir was approximately 19.5% full and the Kouris Reservoir was only 16.7% full. The Kouris Reservoir is located approximately 9 miles away from the ignition area of the fire.

SCENE INVESTIGATION GENERAL CHRONOLOGY:

17. The investigation proceeded in a logical fashion with some tasks occurring simultaneously. The scene was documented prior to, during, and after the scene processing was completed. The following is a brief synopsis of tasks undertaken by the IRT:

    a. Day One, Tuesday, 5 August 2025: IRT Travel Day.
    b. Day Two, Wednesday, 6 August 2025: IRT Travel Day.
    c. Day Three, Thursday, 7 August 2025: Initial Briefing, and initial scene survey.
    d. Day Four, Friday, 8 August 2025: Scene documentation, scene processing, case file review, interviews, and UAS Operations.
    e. Day Five, Saturday, 9 August 2025: Scene documentation, scene processing, case file review, interviews, and UAS Operations.
    f. Day Six, Sunday, 10 August 2025: Final scene processing, scene walk-thru, and case file review.
    g. Day Seven, Monday, 11 August 2025: Exam scene where fatal fire victims were recovered, and document with photos.
    h. Day Eight, Tuesday, 12 August 2025: Final scene documentation and case file review.
    i. Day Nine, Wednesday, 13 August 2025: Review of electrical data and weather data.
    j. Day Ten, Thursday, 14 August 2025: Continue case file review and analysis.

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UTILITY EXAMINATION/ANALYSIS AND INTERPRETATION OF RESULTS:

18. ATF Electrical Engineer Michael G. Abraham conducted a scene examination and met with the Electricity Authority of Cyprus (EAP) to review electrical infrastructure and electrical events around the ignition area/point of origin for the Limassol Fire at latitude and longitude of 34.819090, 32.773394 near the village of Malia.

19. Distribution Network Engineer Stylianos Kounnapis was the charge engineer of the day when the Limassol Fire occurred. He provided system one-line diagrams and Geographic Information System (GIS) mapping with feeder routing, utility pole, and substation locations for review that were associated with electrical events that occurred during the fire. Supervisory Control and Data Acquisition (SCADA) information associated with the electrical events was reviewed for time and relation to the development and spread of the fire.

20. There was no electrical equipment located within the general origin area or specific origin area. The EAC were not authorized to enter actively burning areas by the fire service, however they provided repair and power restoration services as the fire passed through areas. The EAC described fire damage that was reported as the fire spread and provided still images taken from various locations throughout the fire damaged area during their response to repair damaged infrastructure (Figures 5 through 8).

Figure 5: Example of fire damaged electrical infrastructure provided by EAC

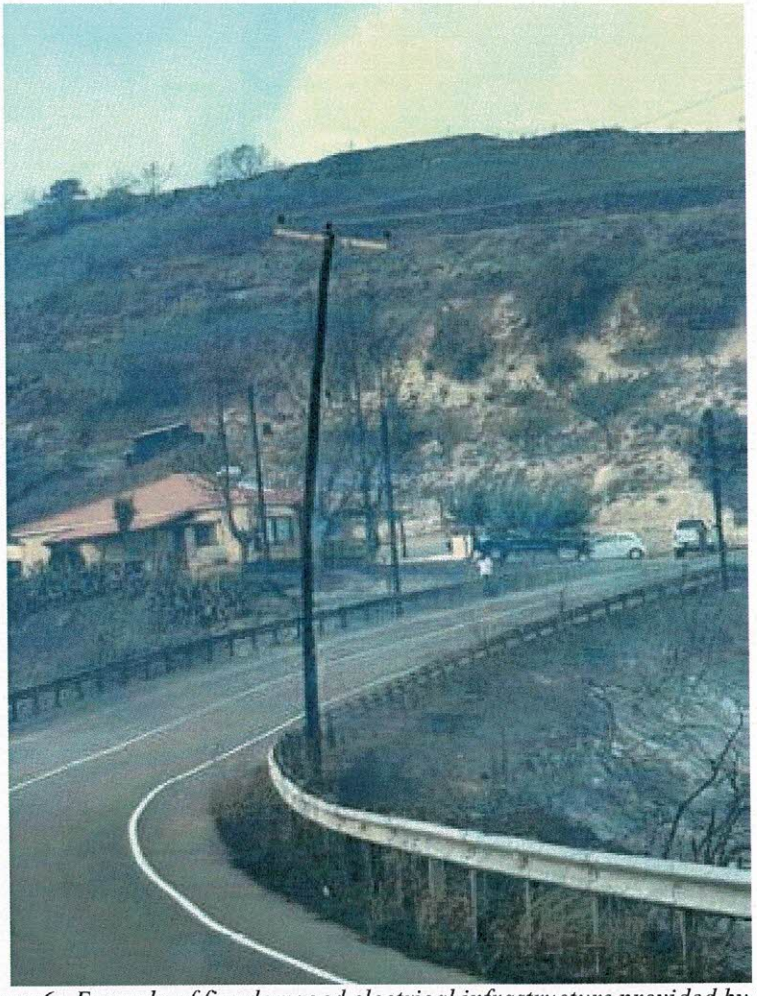

Figure 6: Example of fire damaged electrical infrastructure provided by EAC

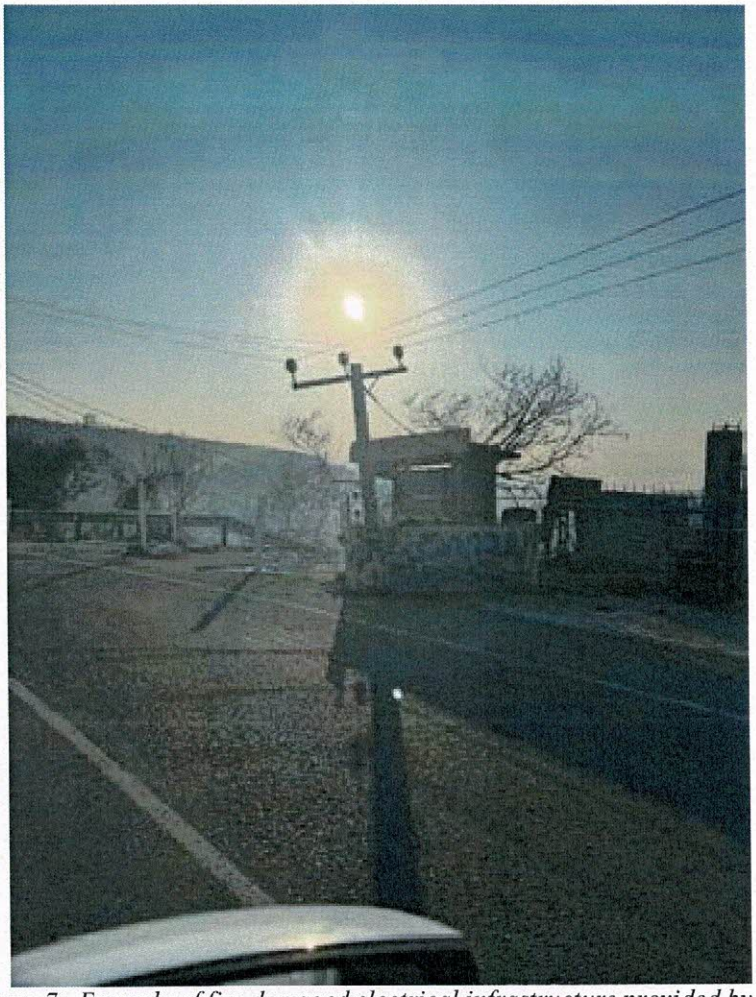

Figure 7: Example of fire damaged electrical infrastructure provided by EAC

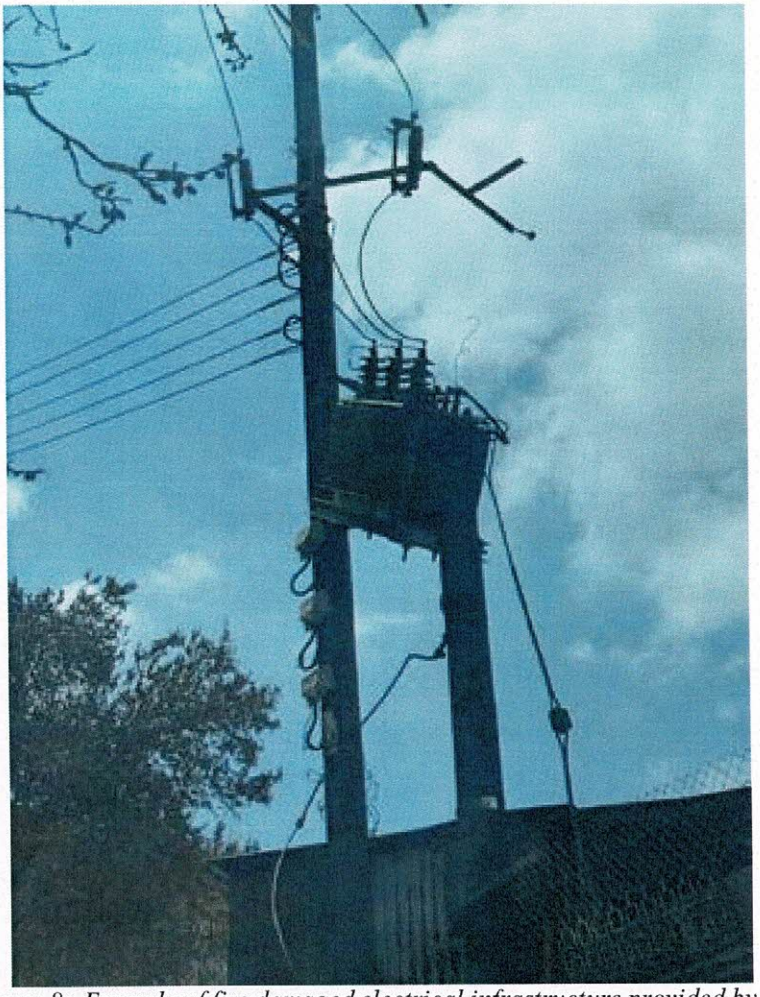

Figure 8: Example of fire damaged electrical infrastructure provided by EAC

21. No other evidence of electrical sources of ignition were observed in the general origin area or specific origin area.

22. According to Mr. Kounnapis, the first recorded electrical event after the start of the fire was communicated by the Electrical Distribution SCADA control center. The event was the operation of an auto recloser due to an earth fault at 14:08 hours on Utility Pole TB69 due to fire impingement near Malia. The Utility Pole location was described to be on an agricultural road between the villages of Omodos and Vasa Koilaniou.

23. The auto recloser is associated with the 11 kilovolt (kV) Pera Pedi medium voltage distribution feeder routed from circuit breaker J13 in the Trimiklini 66 kV Substation.

24. The initial electrical event resulted from fire impingement spread from the point of origin to the auto recloser located approximately 3.7 km in linear distance and 42 minutes after the initial reporting of the fire at approximately 13:26.

25. Subsequent SCADA events were reviewed and summarized in Table 1.

Table 1: Summary of Electrical events described by EAC.

Event #	Time (local)	Event Description
1	14:08	Automatic auto recloser (1064005142) operation on Utility Pole TB69 on the Pera Pedi feeder due to earth fault. The location of the auto recloser is an agricultural road between the villages of Omodos and Vasa Koilaniou. The approximate fault location was near Malia due to fire impingement. Est. Location provided by EAC: 34°49'20.13"N, 32°46'41.17"E
2	17:45	Automatic operation to OPEN circuit breaker J19 in the Trimiklini Substation for the Koilani medium voltage feeder due to overcurrent. Based on discrimination between the location of auto recloser 1064005166 in Vouni village and the substation, the approximate fault location is between Vouni village and Agios Therapon village. Est. Location provided by EAC: 34°48'4.37"N, 32°50'20.62"E
3	18:42	Automatic auto recloser (1064005157) operation on Utility Pole 20606/15/59/1 on the Kouris Dam feeder due to earth fault. The location is on the main road near Souni village. The approximate fault location is near Agios Therapon village. Est. Location provided by EAC: 34°47'17.45"N, 32°52'30.03"E
4	19:32	Automatic operation to OPEN circuit breaker K10 in the Ypsonas Transmission Substation for the Kouris Dam

		medium voltage feeder due to sensitive earth fault. Based on discrimination between the location of auto recloser 1064005157 and the substation, the approximate fault location is between Souni village and Ypsonas. Est. Location provided by EAC: 34°44'41.17"N, 32°54'11.92"E
N/A	18:36	Manual operation to OPEN circuit breaker J13 for the Pera Pedi medium voltage feeder in support of EAC fire suppression crew operations at burning Utility Pole TB67.
5	19:39	Automatic operation to OPEN circuit breaker J13 due to re-ignition of Utility Pole TB67 and overcurrent fault. Est. Location provided by EAC: 34°50'22.09"N, 32°47'44.12"E
6	19:57	Automatic auto recloser (1064005167) operation on Utility Pole 33304A on the Lofou feeder due to overcurrent. The location of the auto recloser is near Silikou village. The approximate fault location is near Lofou village. Est. Location provided by EAC: 34°49'1.77"N, 32°52'34.58"E
7	20:20	Automatic operation to OPEN circuit breaker K04 in the Ypsonas Transmission Substation for the Vati medium voltage feeder due to overcurrent fault. Based on the feeder routing location, the approximate fault location is near Alassa village. Est. Location provided by EAC: 34°45'11.43"N, 32°54'58.50"E
8	22:05	Automatic operation to OPEN circuit breaker J06 in the Trimiklini Substation for the Lofou medium voltage feeder due to sensitive earth fault. Based on discrimination between the location of auto recloser 1064005167 in Silikou and the substation in Trimiklini, the approximate fault location is near Monagri village. Est. Location provided by EAC: 34°48'11.37"N, 32°54'17.51"E

N/A	23:16	Restoration of power to the Pera Pedi medium voltage feeder by isolation of fire damaged medium voltage network infrastructure.

26. A map showing the geographic locations of electrical events summarized in Table 1 is depicted in Figures 9 and 10.

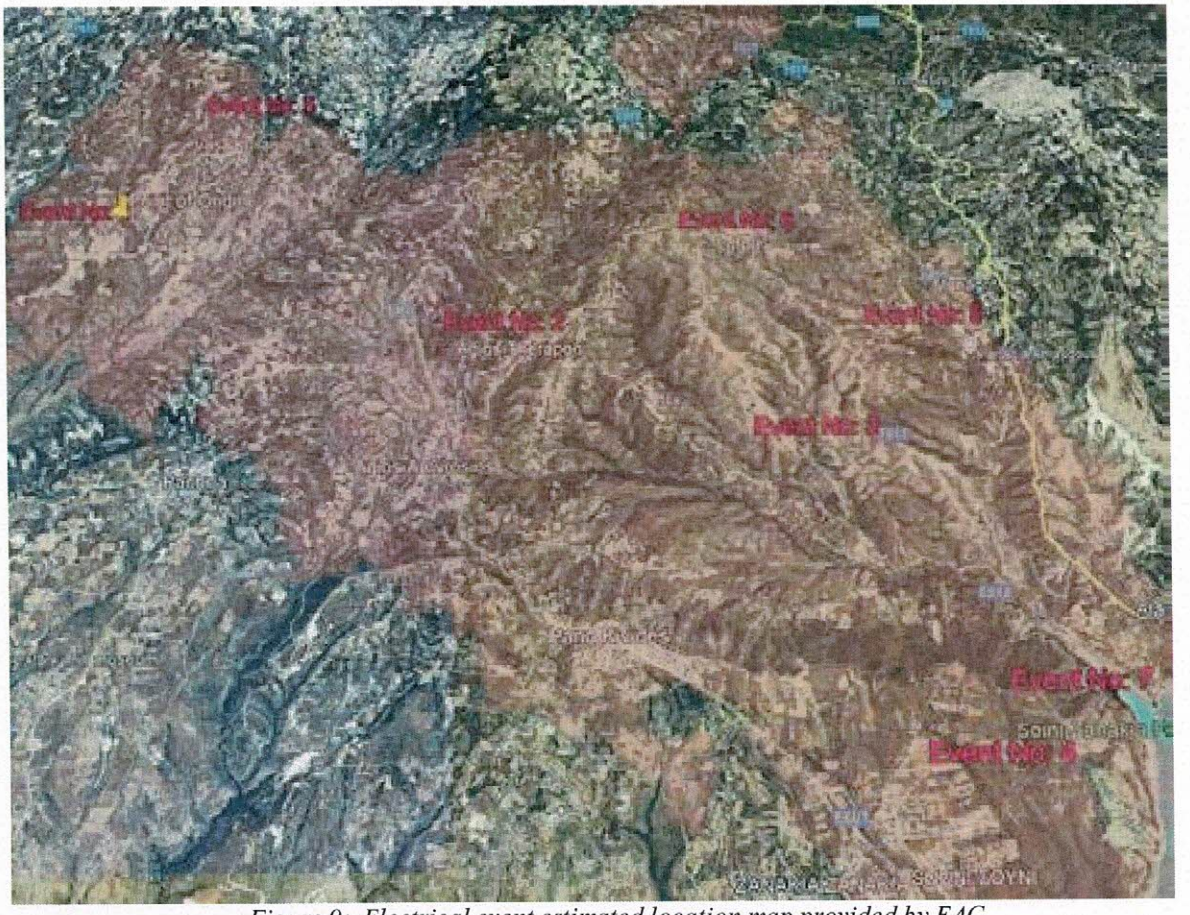

Figure 9: Electrical event estimated location map provided by EAC

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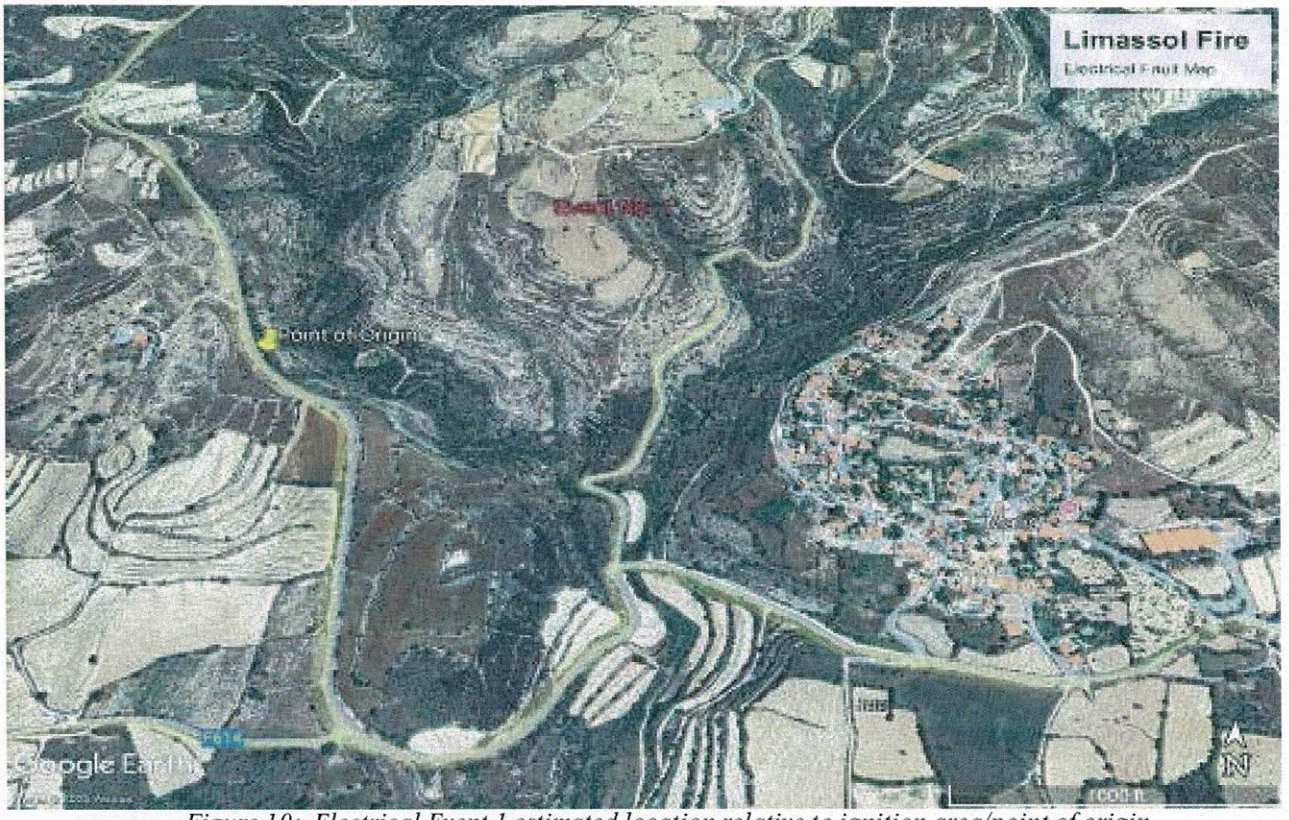

Figure 10: Electrical Event 1 estimated location relative to ignition area/point of origin (approximately 3.7 km) provided by EAC

27. Electrical infrastructure repairs operations and isolation of damaged sections were ongoing at the time of this investigation, however power to the village of Malia was restored on 31 July 2025.

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PARTICIPATING FIRE INVESTIGATORS AND OTHER PERSONNEL:

International Response Team

SACFI/CES Brian Lovin	Team Supervisor
SA/CFI Derek Hill	Lead CFI
SA/CFI Chad Edmunds	Scene/UAS Operations
SA/CFI Ryan McCormick	Scene
SA/CFI Ryan Noble	Scene/UAS Operations
SA Alberto Valez	Scene/Medic/Scene Documentation
SA/CFI Brian Shuford	Leads
EE Michael Abraham	Scene/Utility Contact
SA Orlando Mora	Leads
IRS Stacy Rose	Leads

NARRATIVE:

28. The Limassol Fire was first reported by a series of emergency calls placed to both the Cyprus Police and the Cyprus Fire Service. The fire originated along the edge of the road that ran between the villages of Malia and Arsos and burned approximately 25,000 acres or 10,117 hectares. The Limassol Fire resulted in two (2) fatalities and damaged and/or destroyed approximately 700 structures and 300 vehicles. The fire was brought under control less than two days after the fire broke out.

FIRE DISCOVERY (Initial Report):

[redacted] *(Initial Reporter)*

29. [redacted] had previously provided a statement to the authorities and agreed to meet with investigators at the scene of the fire. [redacted] was traveling to a job in the village of Arsos to take some measurements as part of his employment as a furniture maker. On the date of the fire at approximately 1250 hours, [redacted] was traveling from Lofou to Arsos. On the road between Malia and Arsos, [redacted] discovered a small fire burning on the right-hand side (east) of the road. [redacted] immediately stopped his vehicle and called the fire department at 1326 hours. The call lasted approximately 1 minute and 15 seconds.

30. [redacted] stated the fire was approximately 1 meter tall and 3 meters long and was spreading quickly to both the north and the south, along the edge of the road. [redacted] said the fire had already burned from the very edge of the roadway into the dense vegetation, located between the road and the steep hillside. [redacted] added the fire had not yet burned over the ridgeline, and down into the valley beside the road. SA/CFI Hill stood off the roadway

and asked [redacted] to direct SA/CFI Hill to the distance the fire had burned from the edge of the road towards the east. The distance [redacted] had SA/CFI Hill stand was approximately 3 meters from the edge of the road.

31. Due to the steep terrain, [redacted] was unable to put the fire out. Once [redacted] knew the fire department was on their way, he left the scene to continue his work. [redacted] continued to complete his work, and approximately 45 minutes later drove by the location where he had witnessed the fire burning. Once back at the location where the fire was burning, [redacted] saw firefighters on scene attempting to put the fire out.

INITIAL ATTACK:

Pachna Rural Fire Station

Yiannos Loannou – Lead Fireman

32. Lead Fireman (LF) Yiannos Loannou met with investigators and advised he has been with the fire service for 24 years. On 23 July 2025, LF Loannou was on duty and was notified of the fire. LF Loannou and his partner responded as part of a 2-man engine crew and found an active fire burning towards the village of Malia, to the south and the village of Vasa Koilaniou, which was located to the north/northeast of the village of Malia.

33. LF Loannou said the fire had already burned out the area along the road and had spread into the valley to the east of the road and was also burning about halfway up the opposite ridge. LF Loannou further explained the fire quickly approached Malia and proceeded to burn into the village and jumped over the village and kept burning to the south. Shortly after arriving at the scene of the fire, LF Loannou described a "spot fire" occurring and advised they moved into a position to try and put the "spot fire" out.

34. LF Loannou said the first water drops on the fire occurred at approximately 1420 hours. LF Loannou described the winds blowing in various directions and were very strong. LF Loannou estimated the winds to be 5 – 6 Beaufort (approximately 20 mph to 30 mph) with gusts in the range of 9 Beaufort (more than 47 mph).

35. LF Loannou and his partner showed investigators a location where another fire had occurred approximately 1 week prior to the large fire. This fire occurred at around 2100 hours and was contained to a 9-meter by 9-meter area.

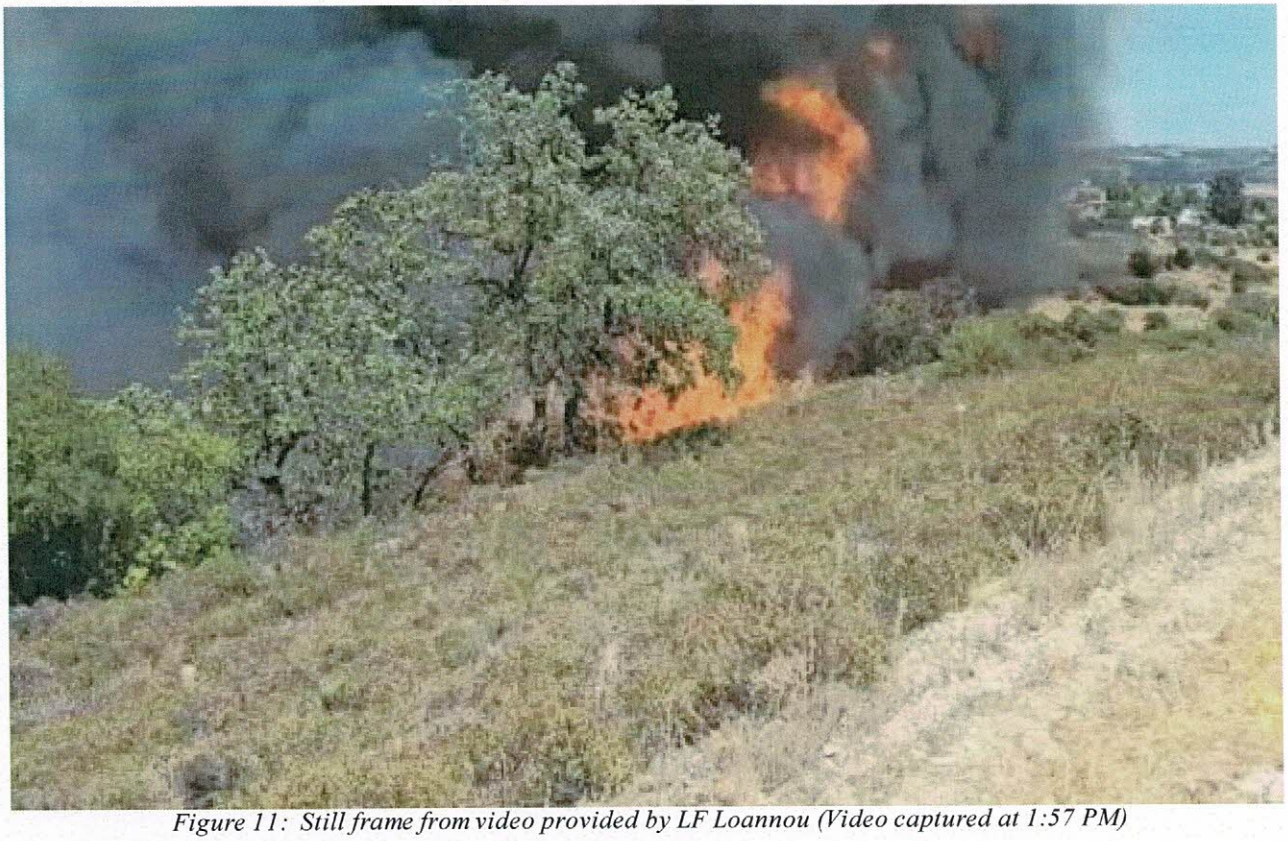

Figure 11: Still frame from video provided by LF Loannou (Video captured at 1:57 PM)

OTHER AGENCY RESPONSE:

Cyprus Police

Georgiou (Ast. 3299 – Pachna Police Station)

36. On 23 July 2025, Officer Georgiou (Ast. 3299) was on duty at the Pachna Police Station when he received two consecutive calls to the station at approximately 1331 hours. The first call was from an anonymous driver passing the fire and the second call was from a resident of Malia. Both callers reported a fire had broken out beside the road between Malisa and Arsos, near the junction leading to Dora. Ast. 3299 advised he immediately called the fire service to report the fire. At approximately 1345 hours, he departed the police station and traveled to the scene of the fire.

37. Ast. 3299 entered Malia and found the fire was already inside of the village and was burning houses. Ast. 3299 met up with one of the callers who reported the fire, and they showed Ast. 3299 the spot where the fire was first observed. Ast. 3299 then assisted citizens of Malia with locating people in need of help and once done with this, he went and assisted with traffic control and other police duties.

WITNESS STATEMENTS:

[redacted] *(Malia Resident)*

38. [redacted] is a resident of Malia and has lived there for 6 years. At approximately 1320 hours on 23 July 2025, [redacted] advised she saw a small fire near the roadway across from the village of Malia, with the fire progressing towards Arsos. She advised her neighbor of the fire, and they called the police and fire departments to report the fire. Kontidou stated due to the strong winds, the fire spread and descended into the valley towards Malia. [redacted] got her mother ready to get of the house and by the time she finished this, the fire was approximately 50 – 100 meters from her home. [redacted] and her mother evacuated to Pachna.

39. [redacted] stated she did not see anything suspicious near the location where the fire began, nor did she see anyone leaving the scene of the fire. [redacted] met with investigators at the scene and showed them where she believed the fire was burning, when she first saw it. [redacted] also provided investigators with a photo she took of the fire at 1333 hours.

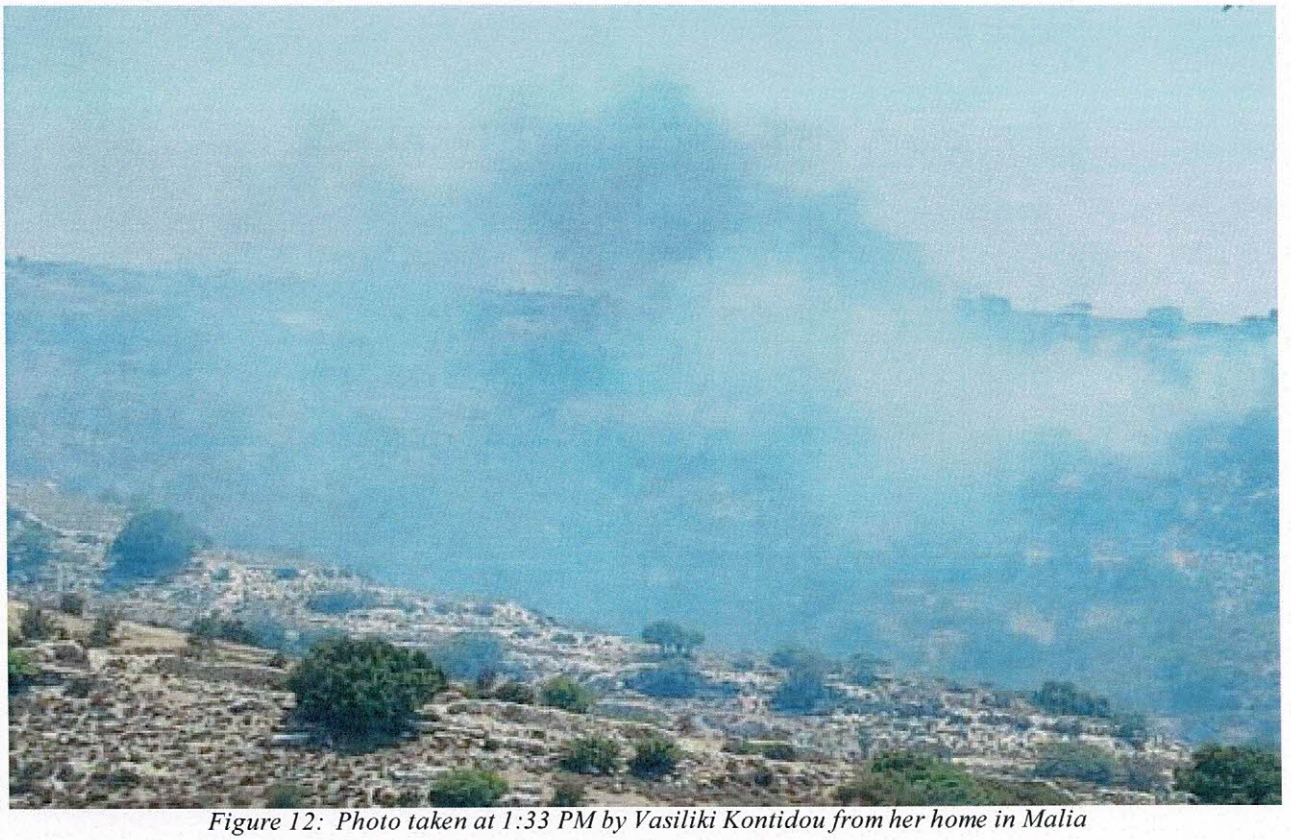

Figure 12: Photo taken at 1:33 PM by Vasiliki Kontidou from her home in Malia

Marilena Athini (Community Leader – Malia)

40. Marilena Athini has been the Community Leader of Malia since November 2024. On 23 July 2025, at approximately 1300 hours, Athini left for work but shortly after leaving, she received a phone call from her [redacted] informed her there was a fire near the village and Athini asked [redacted] to inform the other villagers.

41. At approximately 1330 hours, Athini received another phone call from [redacted] who advised her the fire was now close to the village. Athini arrived back home at approximately 1340 hours and saw the villagers gathered in the square. At approximately 1358 hours, Athini received a phone call from the Civil Defence, who advised her to evacuate the village and go to Pachna, which they did at 1416 hours. Athini confirmed her house was destroyed during the fire.

42. Athini advised that approximately 10 – 15 days prior to the large fire, a smaller fire was discovered to the north of the larger firer but was quickly extinguished by the fire department. Athini met with investigators at the scene and showed them a location where Athini believed the large fire had started.

[redacted] *(Malia Resident)*

43. [redacted] has been a resident of Malia for the past 36 years. On 23 July 2025, at approximately 1300 hours, [redacted] returned home from Platres. While at home, [redacted] noticed what he described as a very small fire, approximately 1 square meter in size burning. [redacted] described the fire as being across from his house and near the road. [redacted] said the winds were very strong and the fire was initially moving towards Arsos. [redacted] immediately called the fire department, but did not receive an answer. [redacted] then called the Pachna Police at approximately 1330 hours and informed them of the fire. [redacted] said the police told him they were already aware of the fire and the fire department was on the way.

44. [redacted] said when he saw the fire, he had an unobstructed view, both towards the area where the fire started, as well as the area of the river and bridge. [redacted] estimated that in a straight line, the fire was approximately 500 meters from his house across the valley, and he could see everything clearly. Within approximately 10 – 15 minutes of calling for assistance, the strong winds caused the fire to expand and grow dangerously. [redacted] described another "outbreak" of fire was created by the wind in the direction of Vasa Koilaniou and then another "outbreak" of fire developed.

45. [redacted] stated that by 1345 hours, the fire became uncontrollable and moved towards their homes. They began to move their vehicles and tried to protect their property. At this time, the fire department had not yet reached the scene of the fire. [redacted] stated he left his residence as it started to burn. [redacted] went to the village square, where he met up with other residents. At approximately 1410 hours, the Civil Defence gave orders to evacuate to Pachna.

[redacted] *(Malia Resident)*

46. [redacted] lives in Malia and is retired. On 23 July 2025, at approximately 1306 hours [redacted] received a phone call from her neighbor advising her there was a fire near the street opposite their village. [redacted] left her house and looked towards Arsos where she saw a small fire near the edge of the road. [redacted] stated she had a clear view of the area because they live on a hill. [redacted] did not see any other fire in the area. [redacted] husband [redacted] told her he had already called the fire department.

47. [redacted] stated the wind was very strong in a northerly direction towards the village of Arsos. In a short period of time, the fire spread down to the river and back up the other side of the valley towards their village and homes. They immediately began to evacuate from their homes and gathered in the village square where they remained until they evacuated to Pachna.

[redacted] *(Passing Motorist)*

48. On 23 July 2025, at approximately 1330 hours, [redacted] was traveling south on the road between Malia and Arsos when he observed a small fire on the east side of the road. [redacted] described the fire was about 2 – 3 meters high and had spread to the south, along the road about 100 meters. [redacted] stated the fire extended approximately 3 – 4 meters eastwards from the side of the road.

49. [redacted] stated he never got out of his vehicle and continued driving down the road. [redacted] proceeded south around the mountain and after about a mile, he observed black smoke coming over the mountain to the north. [redacted] took investigators to the area where he was on the road when he observed the black smoke and it was determined the smoke [redacted] had seen was associated with the fire that he originally passed and was not a second fire.

50. [redacted] stated he did not see anyone around the fire when he passed, and he only observed the brush burning. [redacted] did not take any photographs of the fire or the smoke.

[redacted] *(Keo Employee – Malia)*

51. [redacted] was working at the Keo distillery on 23 July 2025, when he observed black smoke over the trees. [redacted] thought the smoke was close to the village, so he got into his truck and left the distillery to locate the source of the smoke. [redacted] drove to the source of the smoke and located a small fire beside the road leading from Malia to Arsos, north of the village.

52. [redacted] stated the fire had extended from the edge of the road to the east approximately 4 meters. [redacted] stated the fire was small and he thought he could extinguish the fire, so he drove back to the distillery and picked up a co-worker. [redacted] stated he then drove back to the location of the fire and when he arrived, a truck had pulled off the side of the road and an unknown male was trying to extinguish the fire. [redacted] stated the fire was spreading down the hill to the east and was getting larger, so he turned around and drove back to the distillery. [redacted] stated that by the time he got back to the distillery, the fire had already reached the village. The distance between the distillery and the fire location is less than a five (5) minute drive.

53. [redacted] stated when he returned to the distillery the second time the wind was strong and was constantly changing direction.

54. [redacted] was asked to describe the vegetation around the fire and [redacted] explained the vegetation where the fire was burning was like the vegetation located on the west side of the road that was not burned during the fire but added the vegetation where the fire was burning was thicker.

Figure 13: Vegetation on the west side of the road, across from the location where the fire started

55. [redacted] met investigators at the scene and showed investigators where he saw the fire burning and described how it was starting to spread. [redacted] stated he did not take any photographs of the fire or the smoke.

[redacted] *(Passing Motorist)*

56. On 23 July 2025, [redacted] was driving North on E601 when he observed black smoke coming over the mountain. [redacted] met with investigators at the scene and took investigators to the location where he observed the smoke. The location was approximately 0.33 linear miles south of the origin of the fire. [redacted] stated he did not witness any flames, just smoke over the mountain. [redacted] never drove on the road between Malia and Arsos.

57. Investigators with the use of google earth determined the smoke observed by Polycarpos was coming from the fire on Mallias-Arsos Road.

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TIMELINE ANALYSIS:

58. As part of the investigation into the Limassol Fire, a timeline of events was prepared to aid investigators in understanding the sequence of events that transpired before, during, and after the start of the Limassol Fire. The timeline was created after a thorough review of witness statements, photos, videos, and government reports.

Date	Source	Time	Event
23/7/2025	Department of Meteorology	12:10:00 PM (Approx.)	Kouris Dam: Winds were blowing from the Southeast with medium intensity (2-3 Beaufort) and wind gusts of 4 Beaufort.
23/7/2025	Statement of [redacted]	12:50:00 PM (Approx.)	[redacted] had started to travel from Lofou to Arsos.
23/7/2025	Department of Meteorology (AWS)	1:10:00 PM	Malia Station: Temperature of 39.1 degrees Celsius, 19% Relative Humidity, Winds out of the Southwest at 12.5 m/s with gusts of 20.5 m/s.
23/7/2025	Cyprus Institute	1:22:00 PM (Approx.)	A smoke anomaly was detected in an area of 1 square kilometer.
23/7/2025	Statement of [redacted]	1:26:00 PM (Approx.)	[redacted] noticed a small fire measuring approximately 1m high and 3m wide burning on the right side of the road and stopped his car to call the fire department and report the fire.
23/7/2025	Cyprus Fire Summary Report	1:28:00 PM (Approx.)	A call via private phone was received, reporting a wildfire in vegetation on the road of Malia towards Arsos. The message was conveyed to the Pachna Rural Fire Station for dispatch.
23/7/2025	Cyprus Fire Summary Report	1:29:00 PM (Approx.)	The on-duty officer and the Fire Service Operations Coordination Centre were notified.
23/7/2025	Statement by [redacted]	1:29:00 PM (Approx.)	[redacted] saw a fire of about 1 square meter on the side of the road opposite the road to Arsos before the village. The winds were strong, and the fire was moving towards Arsos.

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23/7/2025	Cyprus Fire Summary Report	1:30:00 PM (Approx.)	Pachna Police Station was notified of the fire.
23/7/2025	Statement by [redacted]	1:30:00 PM (Approx.)	[redacted] left work in Arsos heading towards Malia and saw a large fire measuring approximately 4x100 meters long on the left/east side of the road moving towards the village of Dora.
23/7/2025	Statement of [redacted]	1:30:00 PM (Approx.)	[redacted] observed three very small fires parallel to the road and another on the slope about 15 meters below on a steep point on the slope, not accessible by humans. Each fire was 5-10 meters apart from each other and the extent was about 1 meter.
23/7/2025	ATF Follow-Up	1:30:00 PM (Approx.)	Two separate calls were placed to the Fire Service.
23/7/2025	Statement of Constable 3299 A. Georgiou	1:31:00 PM (Approx.)	Constable A. Georgiou received two consecutive calls to the station: 1. From a passing anonymous driver 2. Malia resident, [redacted]
23/7/2025	Cyprus Institute	1:32:00 PM (Approx.)	Two large areas were identified with high temperatures indicating a fire of a total area of 8 square kilometers (4 square kilometers and 4 square kilometers).
23/7/2025	Cyprus Fire Summary Report	1:33:00 PM (Approx.)	Pachna Rural Fire Station dispatched two fire engines, one 5000 litre water tanker and one rapid response vehicle with 1200 litres of water to the wildfire; Kivides Rural Fire Station was also requested to respond.
23/7/2025	Statement by [redacted]	1:33:00 PM (Approx.)	[redacted] called his boss and asked him to inform the fire department while he was at the spot. He did not see smoke or fire at the second spot.
23/7/2025	Department of Forests Summary	1:34:00 PM (Approx.)	Report of the wildfire by a citizen to the General Operations Centre reporting the wildfire in Malia village.

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23/7/2025	Cyprus Fire Summary Report	1:36:00 PM (Approx.)	Dispatch officer transmitted via radio that he was on his way, could see smoke, and inquired whether any water-equipped firefighting aircrafts were available to exercise preventive drops. He was informed the aircrafts were dispatched to a wildfire in Anayeia in Lefkosia.
23/7/2025	Cyprus Fire Summary Report	1:37:00 PM (Approx.)	The Limassol on-duty officer departs for the wildfire
23/7/2025	Cyprus Fire Summary Report	1:43:00 PM (Approx.)	One of the two fire engines from Pachna Rural Fire Station arrived at the fire. The fire was an area of about 1.5 hectares and spreading rapidly towards Malia and northeast of the village towards Vasa.
23/7/2025	Cyprus Fire Summary Report	1:44:00 PM (Approx.)	The second of two fire engines from Pachna Rural Fire Station arrived at the fire.
23/7/2025	Statement of Constable 3299 A. Georgiou	1:45:00 PM (Approx.)	Constable A. Georgiou left the station to head to the scene of the fire. Upon arrival, the fire was already inside the village.
23/7/2025	Statement of [redacted]	1:48:00 PM (Approx.)	Just before the Arsos sign on the right side of the road, [redacted] noticed a fire burning approximately 4 meters in from the edge of the road.
23/7/2025	Cyprus Fire Summary Report	1:55:00 PM (Approx.)	It was reported the wildfire had spread to approximately 2 hectares and is at the village of Malia, rapidly heading uphill towards the residences in the village and efforts were being made to extinguish the wildfire which proved difficult.
23/7/2025	Cyprus Fire Summary Report	2:00:00 PM (Approx.)	Malia Evacuated per Civil Defence

FIRE BEHAVIOR ANALYSIS AND WEATHER:

59. On 22 July 2025, the Cyprus Department of Meteorology (Department of Meteorology) at the Larnaka Airport issued an Extreme Maximum Temperature Warning for Cyprus. The Warning was issued at 1705 hours on 22 July 2025 and included an awareness level of "ORANGE." The Warning was valid from 1200 hours on 23 July 2025, through 1700 hours on 23 July 2025. The warning stated, *"the maximum temperature is expected to rise to around 43 degrees Celsius over the inland areas and to around 34 degrees Celsius over the higher mountainous areas."*

60. Due to the forecasted extreme temperatures, the Cyprus Fire Service extended the use of aerial resources to cover 23 July 2025, especially in the Limassol area due to the "ORANGE" weather warning that was issued. Additionally, two fire patrols were established by Limassol Fire Stations. The West Limassol Station (area of Agios Sylas, Vounaros, and Kouris Dam) and the East Limassol Station (area of Eptagoneia Rural Fire Station).

61. The Department of Meteorology monitors Automatic Weather Station (AWS) Data for stations located throughout Cyprus. The Malia AWS is located approximately 1.14 kilometers to the southeast of the origin area for the fire.

62. As part of the analysis of the incident, the weather data was analyzed and utilizing materials available to investigators, the probability of ignition based on the given weather data set was determined. The NWCG Glossary of Wildland Fire defines the following terms, which are included in this report to aid the reader.

Ignition Probability – chance that a firebrand will cause an ignition when it lands on receptive fuels.

Firebrand – Any source of heat, natural or human made, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels.

Fuel Moisture Content (FMC) – the quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees F.

Relative Humidity (RH) – the ratio of the amount of moisture in the air, to the maximum amount of moisture that air would contain if it were saturated. The ratio of the actual vapor pressure to the saturated vapor pressure.

Fuel Bed – an array of fuels usually constructed with specific loading, depth, and particle size to meet experimental requirements; also, commonly used to describe the fuel composition.

Fuel Bed Depth – average height of surface fuels contained in the combustion zone of a spreading fire front.

Fuel Loading – the amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. This may be available fuel (consumable fuel) or total fuel and is usually dry weight.

Fuel Arrangement – a general term referring to the spatial distribution and orientation of fuel particles or pieces.

Vertical Fuel Arrangement – fuels above ground and their vertical continuity, which influences fire reaching various levels or vegetation strata.

63. The term receptive fuel bed is not defined in the NWCG Glossary of Wildland Fire but refers to a fuel bed that would be conducive to the ignition and spread of a fire. Several factors could determine whether a fuel bed is conducive to ignition including but not limited to the types of fuel present, an adequate fuel moisture, fuel arrangement and continuity, vertical fuel arrangement, fuel bed depth, and fuel loading.

Station	DateTime	Type	AIR TEMPERATURE 1.2m(avg) - (°C)	AIR TEMPERATURE 1.2m(max) - (°C)	AIR TEMPERATURE 1.2m(min) - (°C)	RELATIVE HUMIDITY 1.2m(avg) - (%)	RELATIVE HUMIDITY 1.2m(max) - (%)	RELATIVE HUMIDITY 1.2m(min) - (%)	WIND DIRECTION 10m(avg) - (°)	WIND SPEED 10m(avg) - (m/s)	WIND SPEED 10m(max) - (m/s)	WIND SPEED 2m(avg) - (m/s)
MALIA	7/23/2025 12:00	AWS Server	39.8	40	39.5	21	22	20	237	7.7	13.7	2.3
MALIA	7/23/2025 12:10	AWS Server	39.9	40.2	39.7	20	21	19	247	8.8	14.8	2.9
MALIA	7/23/2025 12:20	AWS Server	40	40.1	39.6	20	21	19	246	9	13.5	2.1
MALIA	7/23/2025 12:30	AWS Server	39.9	40.1	39.7	20	20	19	233	7.8	12.8	2.1
MALIA	7/23/2025 12:40	AWS Server	40.1	40.3	39.9	19	20	19	241	8.6	14.7	2.1
MALIA	7/23/2025 12:50	AWS Server	40	40.2	39.7	19	20	18	245	9.7	16	2.5
MALIA	7/23/2025 13:00	AWS Server	39	39.7	38.8	19	20	19	248	10.5	19	2.6
MALIA	7/23/2025 13:10	AWS Server	39	39.1	38.8	19	20	19	241	12.5	20.5	3.3
MALIA	7/23/2025 13:20	AWS Server	38.3	38.9	38	19	20	19	229	13.2	19.2	3.3
MALIA	7/23/2025 13:30	AWS Server	38.2	38.3	38.1	19	20	19	244	10.6	21.7	2.7
MALIA	7/23/2025 13:40	AWS Server	38.2	38.3	38.1	19	20	18	252	7.5	19	1.9
MALIA	7/23/2025 13:50	AWS Server	38.3	38.4	38.2	18	19	18	249	9	15.9	2.3
MALIA	7/23/2025 14:00	AWS Server	38.1	38.3	37.8	18	19	18	255	9.2	19.1	2

Figure 14: Snip from Malia Automated Weather Station for weather around start time of Limassol Fire

64. Investigators examined the weather conditions reported by the Malia AWS around the start time of the Limassol Fire and noted the temperature was approximately 39 degrees Celsius (102.2 degrees Fahrenheit), with a relative humidity (RH) of 19. The winds were strong out of the southwest at 12.5 m/s (27.9 mph), with maximum wind speeds of 20.5 m/s (45.8 mph).

65. Using data provided by the Malia AWS, the fine dead fuel moisture, fuel shading and probability of ignition were calculated. Based on the environmental conditions noted, the ignition probability for the times outlined

was determined to be 100%. The probability of ignition is defined as the chance that a firebrand will cause an ignition when it lands on receptive fuel beds.

U.S. Forest Service – Missoula Fire Sciences Laboratory

66. Investigators provided the U.S. Forest Service – Missoula Fire Sciences Laboratory (USFS FSL) with the environmental conditions reported at the time of the Limassol Fire. These environmental conditions were obtained from the Malia AWS as previously discussed and using this data the USFS FSL prepared a detailed map showing the predicted winds that occurred prior to, during, and after the start of the Limassol Fire. The winds are expressed in "20-foot winds". "20-foot winds" refers to winds speed measured approximately 6 meters above the ground or the average height of surrounding vegetation. The actual winds speed felt at ground level, especially in areas with vegetation, will likely be lower. The next Figures show "20-foot" winds speeds at the top of each hour, 1100 hours through 1400 hours. The winds were out of the southwest and increased in speed from 1100 hours to 1400 hours.

Figure 15: Wind Ninja animation for 1100 hours on 23 July 2025, reflecting computed wind speeds. The yellow pin in the middle of the screen represents the ignition area.

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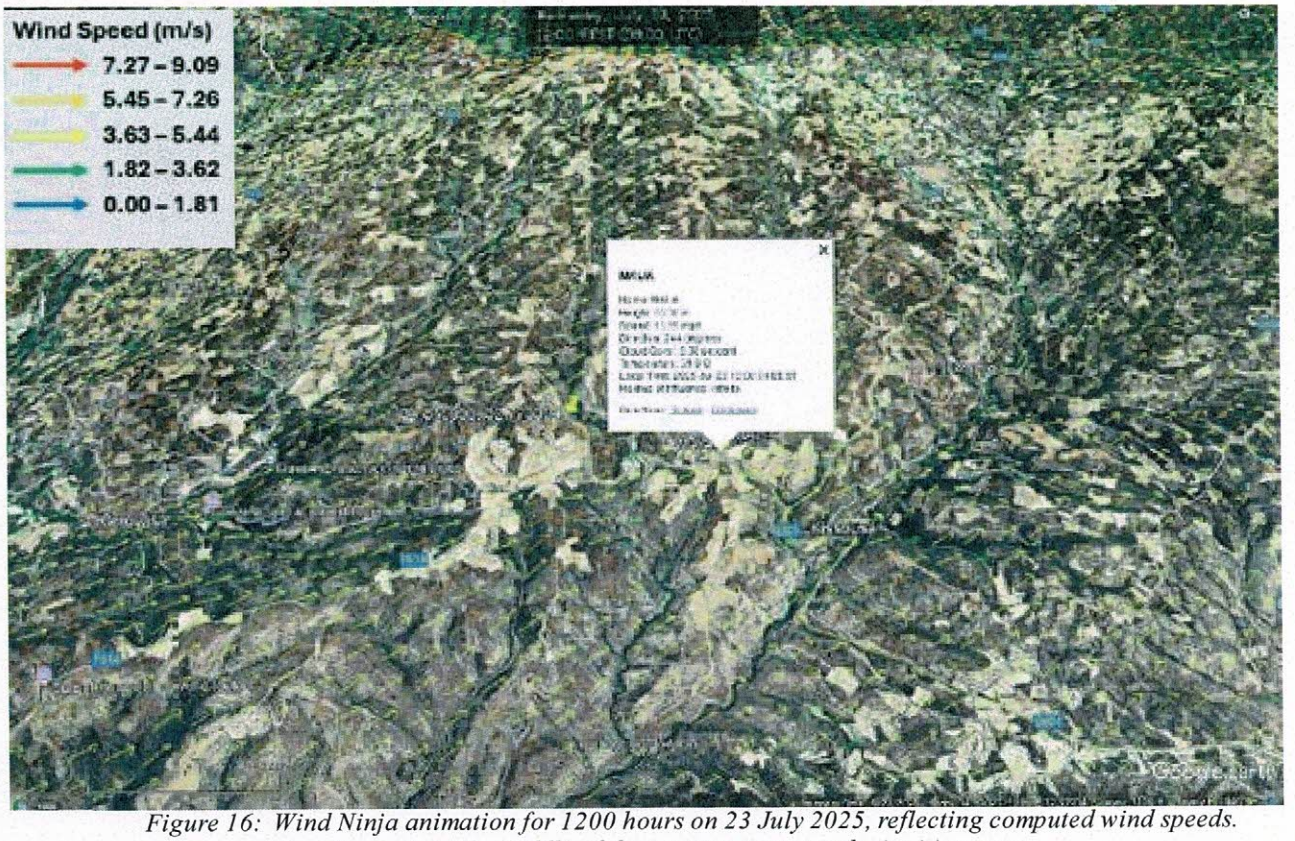

Figure 16: Wind Ninja animation for 1200 hours on 23 July 2025, reflecting computed wind speeds. The yellow pin in the middle of the screen represents the ignition area.

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Figure 17: Wind Ninja animation for 1300 hours on 23 July 2025, reflecting computed wind speeds. The yellow pin in the middle of the screen represents the ignition area.

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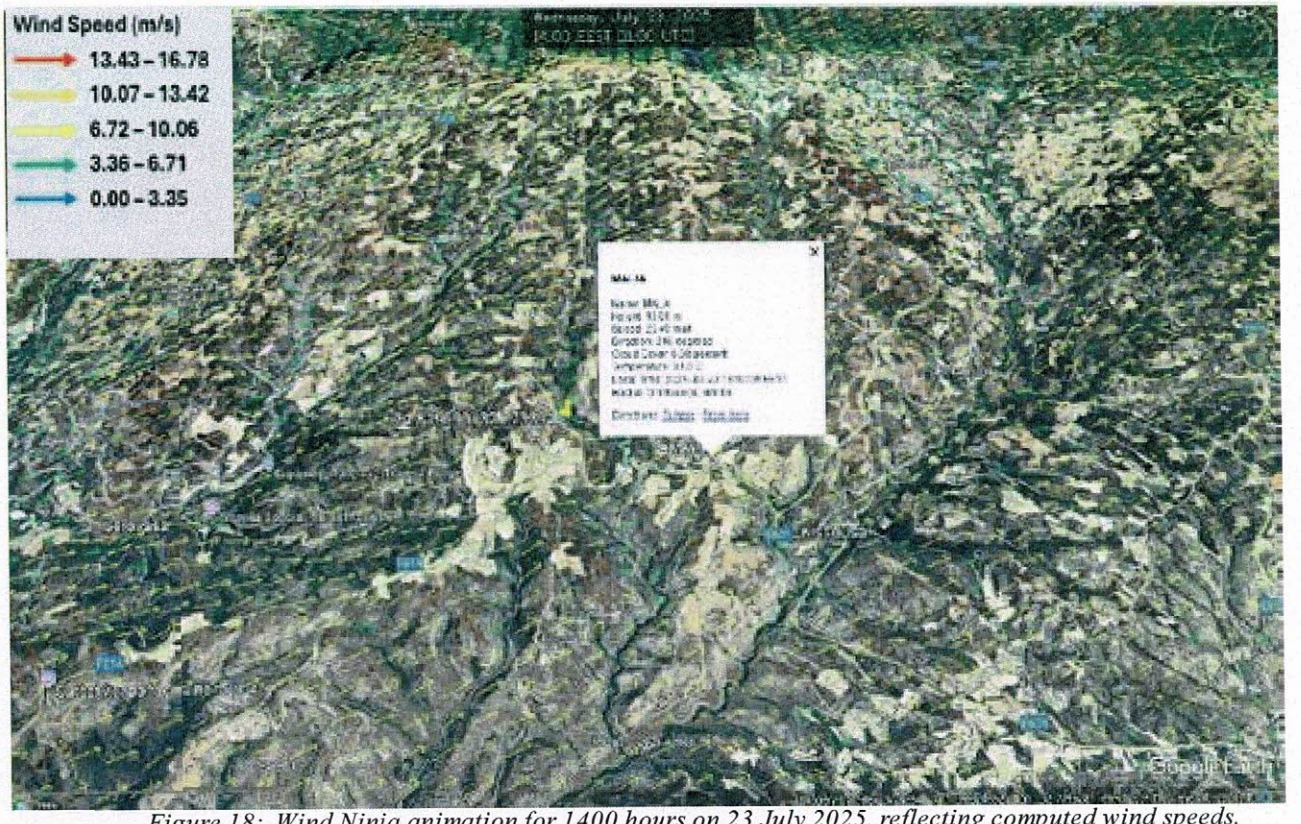

Figure 18: Wind Ninja animation for 1400 hours on 23 July 2025, reflecting computed wind speeds. The yellow pin in the middle of the screen represents the ignition area.

67. Although the winds remained constant out of the southwest, the topography of the area allowed the fire to burn in several directions regardless of the wind direction. The topography of the area allowed topography-driven winds to rapidly spread the fire in all directions due to the localized wind patterns that can be created by such winds.

68. Using data contained within the timeline and data provided by the Electricity Authority of Cyprus (EAP), investigators were able to estimate the rate of fire spread based on the known times of certain events and the known locations of said events, such as emergency calls and documented electrical faults. The first rate of fire spread that was calculated utilized the time [redacted] called to report the fire (1326 hours), and the time Fault 2 was recorded by EAP. The distance between the two locations was approximately 6,545 meters, and considering the amount of time it took for the fire to spread between the two points, the estimated rate of fire spread was determined to be 60 meters/minute (m/min).

69. A second rate of fire spread was calculated utilizing the time and location of Faults 2 and 3 and identified by the EAP. The distance between the two locations was approximately 3,642 meters, and considering the amount of time it took for the fire to spread between the two points, the estimated rate of fire spread was determined to be 63 m/min.

SCENE PROCESSING:

70. On 7 August 2025, investigators traveled to the scene of the Limassol Fire to become familiar with the overall area impacted by the fire. Beginning on 8 August 2025, investigators began the initial walk around along the west edge of the Limassol Fire. Investigators also climbed down the ridgeline to the east and examined the area below the road. Overall, the area was littered with a large amount of garbage that appears to have been dumped out over a long period of time. This garbage included household appliances, tires, bottles, cans, clothing, painting supplies, and many other items.

71. The west edge or west boundary of the Limassol Fire was formed by the road that led from Malia to Arsos. Investigators walked both to the north and to the south along the road and decided to begin the fire scene examination near an area where firefighters had parked their engine during their response to the fire.

72. Investigators systematically worked in a southerly direction with the roadway forming the west boundary and the ridgeline to the east forming the east boundary. Investigators systematically worked to identify both macroscale and microscale fire pattern indicators. As fire pattern indicators were identified, they were marked with red pin flags for areas of advancing fire, yellow pin flags for areas of lateral fire spread, and blue pin flags for areas of backing fire.

73. Macroscale fire pattern indicators associated with an advancing fire were identified, and included protection, angle of char, and sooting. Transition zones were identified where the advancing fire transitioned to a lateral fire vector or flank fire. Fire pattern indicators such as protection, sooting, and noted damage differential between like fuels that showed a change in direction of fire spread or a change in the intensity of the fire were noted in the lateral fire vector.

74. The initial fire pattern indicators that were identified showed a fire spreading to the north between the edge of the road and ridgeline to the east. Advancing fire pattern indicators continued to show a fire with a greater intensity moving in a northerly direction. Areas of a lateral vector were noted along the east aspect of the ridgeline with the fire showing movement to the east or downhill as well as areas of advancing fire, indicating a higher intensity fire moving to the west up the east aspect of the ridge.

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GENERAL ORIGIN AREA IDENTIFICATION:

75. Utilizing a systematic method of identifying and marking fire pattern indicators, and conducting interviews of firefighters, and witnesses to the fire in its incipient stage, investigators identified a general origin area. The processing of the general origin area continued with investigators continuing to identify and mark fire pattern indicators. The general origin area measured approximately 38 meters long by 10 meters wide.

Figure 19: Google Earth snip depicting General Origin Area (red box) in relation to the village of Malia and road to Arsos

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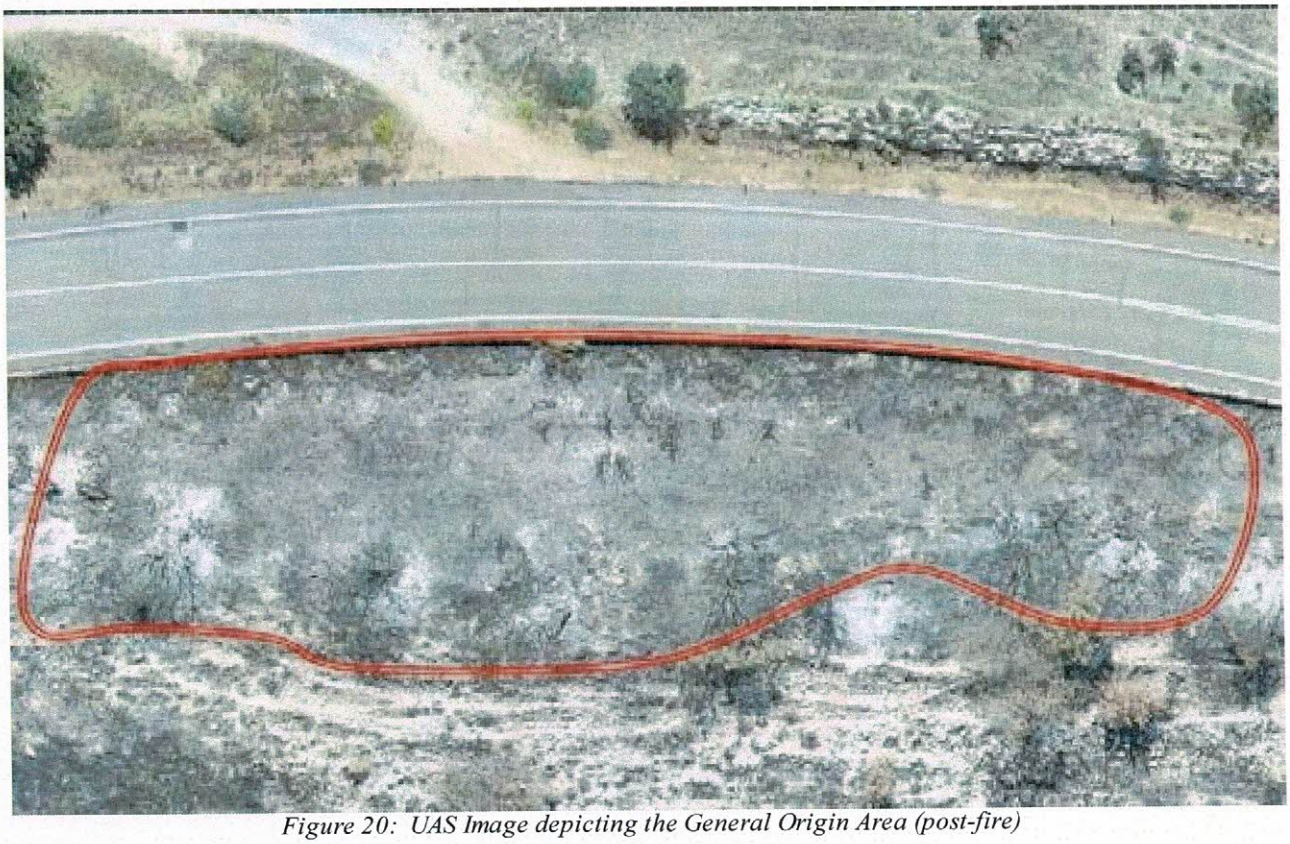

Figure 20: UAS Image depicting the General Origin Area (post-fire)

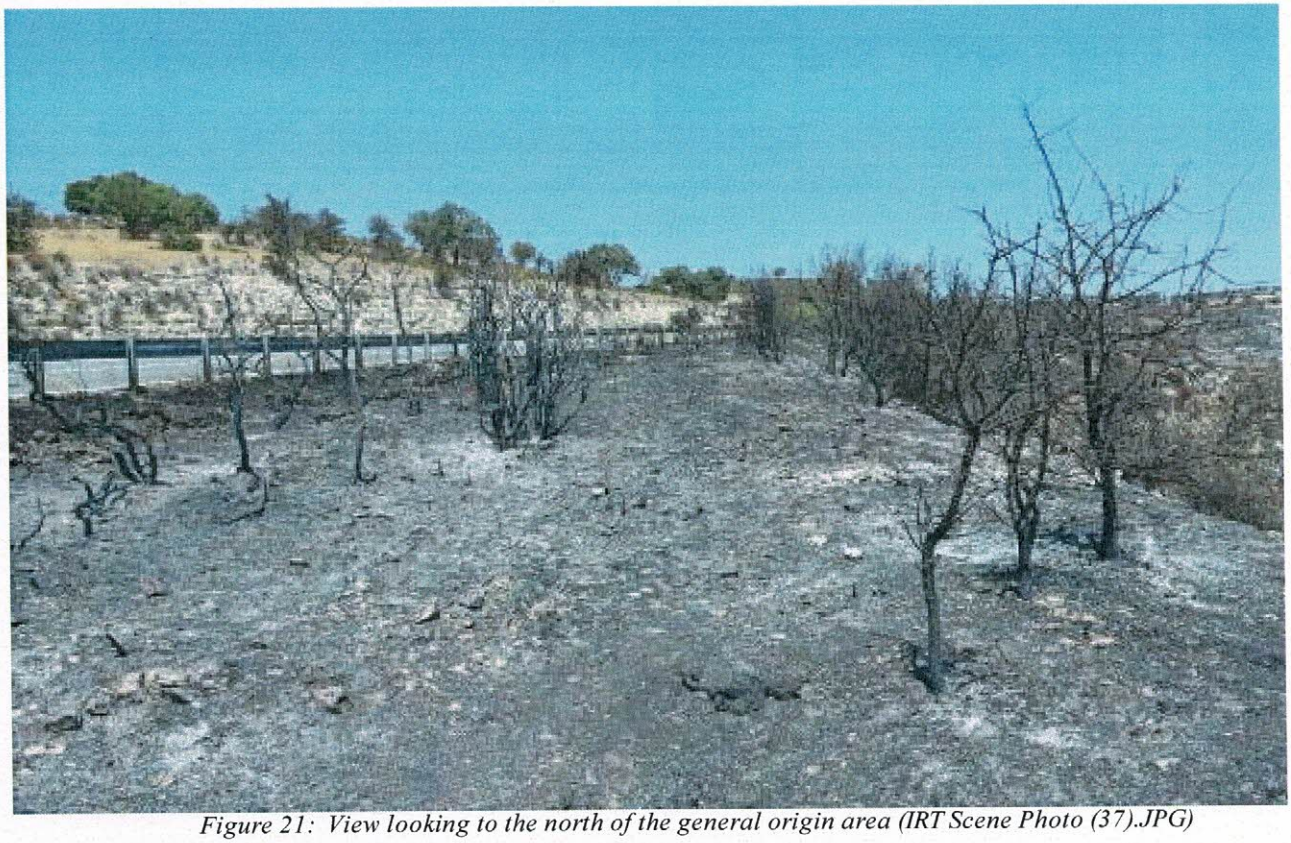

Figure 21: View looking to the north of the general origin area (IRT Scene Photo (37).JPG)

76. Within the general origin area, the fire pattern indicators showed fire movement both in a northerly and southerly direction. Based on the indicators present and the damage caused by the fire, investigators determined the fire had burned through portions of the general origin area in varying directions due to the shifting winds that were described by witnesses.

SPECIFIC ORIGIN AREA EXAMINATION:

77. After considering the witness statements and analyzing the fire pattern indicators, investigators identified a specific origin area. Once the specific origin area was identified, investigators continued to systematically work the area by marking both macroscale and microscale fire pattern indicators.

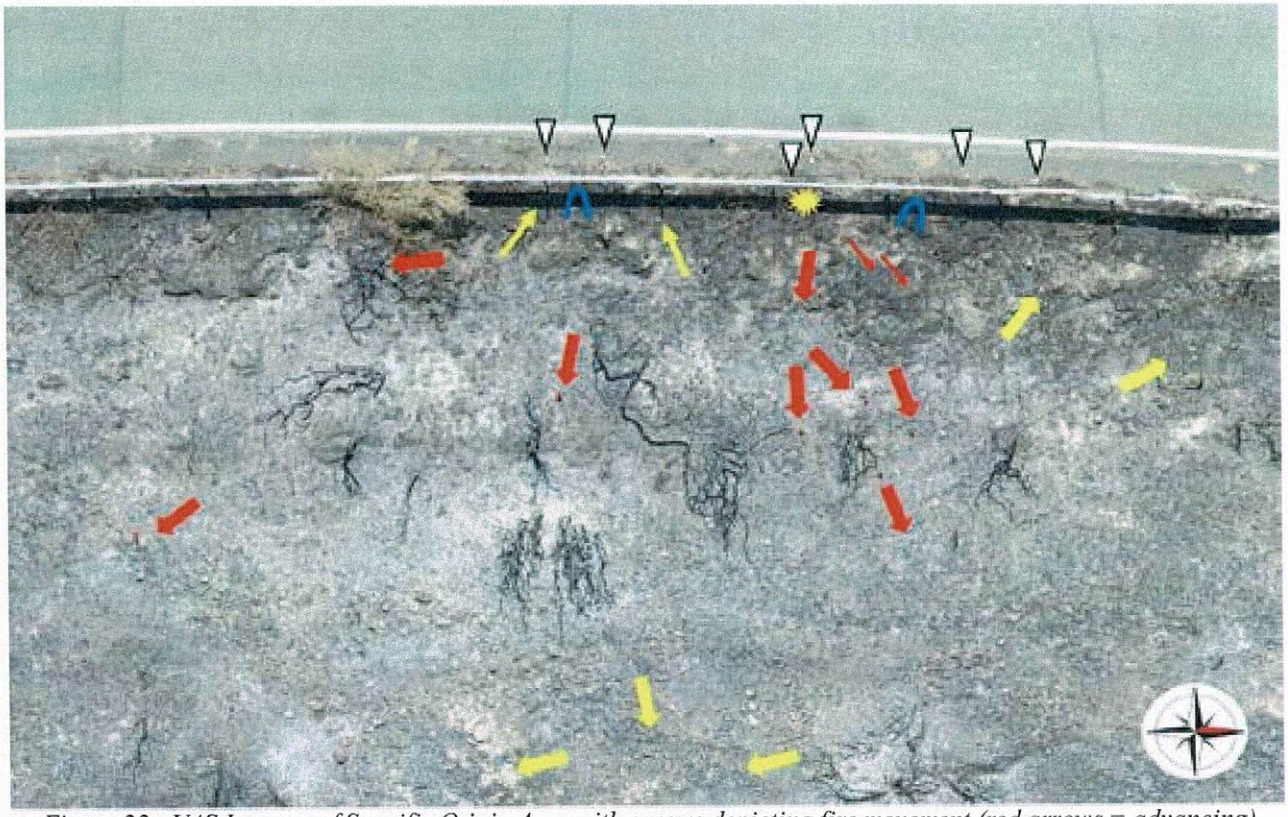

Figure 22: UAS Imagery of Specific Origin Area with arrows depicting fire movement (red arrows = advancing) (yellow arrows = lateral) (blue U shape = backing) (inverted white triangle = cigarettes butts)

78. Following the fire pattern indicators, investigators identified and marked both macroscale and microscale indicators and generally moved from east to west towards the road. As they worked towards the road, the overall area being examined began to narrow, leading up to the edge of the road. Based on the fire pattern indicators present, this area became the ignition area. The ignition area was determined to be approximately 30 centimeters by 30 centimeters.

IGNITION AREA EXAMINATION:

79. Once an ignition area was identified, the ignition area was examined using a magnifying glass to identify any potential ignition sources. A systematic examination of the ignition area turned up a partially burned cigarette butt and a completely burned cigarette butt. Additional cigarette butts were located within several meters of the ignition area but were unburned and the vegetation immediately adjacent to them was unburned as well.

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Figure 23: Identified Ignition Area marked with white flags and below the pink flagging tape (RIMG3128)

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Figure 24: Close-up of cigarette butts within the ignition area (RIMG3137)

Figure 25: Close-up of cigarette butts recovered within the ignition area (RIMG3139)

80. Although several cigarette butts were located near the identified ignition area, many of these cigarettes butts did not exhibit any thermal damage and are believed to have possibly been deposited in the area after the fire occurred or were present when the fire occurred but were not damaged. The cigarette butts were documented with photographs.

81. The two (2) cigarette butts referenced in Figure 25 were collected by investigators and secured as evidence. The evidence was turned over to Cyprus authorities.

CAUSE DETERMINATION:

Excluded Fire Cause Categories

82. Based on information obtained and analyzed during the investigation and observations made within the fires general origin area and specific origin area, investigators excluded a number of cause categories after

cognitively examining each of them as a hypothesized cause of the fire in light of all other data including: Firearms and Explosives Use, Railroad Operations and Maintenance; Fireworks; Recreation and Ceremonies; Misuse of a Fire by a Minor; and Other Causes (including Spontaneous combustion, Coal seam, Electric fence, Illegal substance manufacture, and Structures). There was no affirmative data or supporting evidence to support these specific cause categories for the fire, and therefore they were excluded.

Included Fire Cause Categories

Lightning

83. The area where the Limassol Fire originated has been in a persistent drought which would make the area susceptible to fires caused by lightning strikes. Based on a review of weather data and witness statements, there is no indication of severe weather capable of producing a lightning strike moving through the area in the time preceding the fire. Based on the above information, this cause hypothesis was excluded.

Debris and Open Burning

84. The area where the Limassol Fire originated was examined by investigators. During the examination, investigators found a large amount of garbage that had been dumped in the area. Based on the amount of garbage present and the condition of the items that were dumped, it appears the area has been used for illegal dumping for an extended period. The dumped materials included old appliances, miscellaneous electronics, painting supplies and other miscellaneous items. Although an unknown item capable of igniting a wildfire could easily be dumped out with garbage, the ignition point for the Limassol Fire did not contain any evidence of debris burning or open burning. Based on the above information, this cause hypothesis was excluded.

85. It should be noted both witnesses and fire service personnel provided investigators with information regarding a fire that had occurred withing 2 weeks of the Limassol Fire, in the same areas. The fire service showed investigators the location of this fire and this area was examined. Within the fire debris, investigators found items consistent with garbage being dumped in the area and likely these dumped items contained an ignition source or the individual dumping the items inadvertently started the fire by carelessly disposing of their cigarette. This fire was reported at approximately 2115 hours.

Equipment and Vehicle Use

86. NFPA 921 and PMS 412 list Equipment Use and/or Vehicles as a potential cause for a wildfire. In each of these guides, fires caused by equipment use and/or vehicles are discussed in terms of a failure occurring with the equipment itself or the overheating of equipment resulting in a fire via radiant or conductive heat transfer. Due to the proximity of the roadway to the ignition point of the Limassol Fire, equipment use and/or vehicle use

was examined as a potential cause of the Limassol Fire. Some common causes may be a vehicle dragging something metal (chains, exhaust pipes, etc.), hot exhaust component or worn brake equipment.

87. A search of the ignition area with a handheld magnetometer did not reveal any metal particles and the systematic search of the ignition area did not reveal any items consistent with pieces of ceramic brake pads. When equipment or a vehicle drags metal creating sparks, this will likely create a line of smaller spot fires along a roadway if the equipment or vehicle keeps driving. Similarly, when brake pads become heated and fail, pieces may be ejected and land in a susceptible fuel bed resulting in a fire. Like metal dragging, this ignition scenario may result in several smaller spot fires occurring along the roadway. Although spot fires were reported as the fire grew and spread over the mountainous region, there was no reported spot fires along the roadway and there was no indication of a broken-down vehicle being in the area. Based on the above information, this cause hypothesis was excluded.

Power generation/transmission/distribution

88. ATF EE Abraham reviewed information provided by the Electricity Authority of Cyprus (EAC) and personally examined the scene of the fire; refer to Report of Investigation #14 for details. Based on EE Abraham's review of the scene and the information provided, EE Abraham opined there was no failure associated with the electrical utility infrastructure, coinciding with the identified specific origin area and ignition area for the Limassol Fire on 23 July 2025. Additionally, no electrical utility infrastructure was located within the identified general and specific origin areas or the ignition area. Based on the above information, this cause hypothesis was excluded.

Refraction

89. The hypothesis of refraction via glass was examined as a potential cause of the fire due to the discovery of many intact glass bottles and various pieces of broken glass within the general origin area, and outside of the general origin area. Among the objects known to have caused fires via refraction area clear glass bottles filled with a clear liquid, headlight lenses, mirrors, old window glass (bubbled), shiny aerosol can bottom, polished metal, and clear plastic bags filled with water or other clear liquid. Flat broken glass lacking magnification or colored glass is not a competent source of ignition.

90. For refraction to occur, a light source (sun) hits the object, such as a clear bottle containing a clear liquid, the light will slightly change direction. This refraction of the light can lead to focusing the sun's rays and concentrating the heat on a small area.

91. Although the environmental conditions present at the time of the fire were conducive to a refractive event causing the fire, no bottles or pieces of broken glass bottles were located within the more defined specific origin area. Based on the above information, this cause hypothesis was excluded.

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Incendiary

92. Investigators examined a hypothesis of an open flame ignition to available fuels (vegetation) or other combustibles as a cause for the fire. Investigators relied on data collected during the investigation to test this hypothesis. None of the witness statements describe seeing any individual(s) in the area where the fire originated prior to the fire being reported to authorities. The intentional setting of a wildfire is not an uncommon occurrence, and these starts can be initiated by an individual applying an open-flame device, such as a cigarette lighter, to dry vegetation or other combustibles.

93. Based on the examination, investigators are aware that individuals frequent the area to dispose of garbage and other items. This would afford an individual the chance to ignite a fire, and due to the road nearby, it would also allow the same individual the chance to quickly leave the area after a fire was ignited. Although these factors may cause one to hypothesize the possibility the Limassol Fire was intentionally set, this hypothesis must be tested on data available to investigators and not on an absence of data.

94. Investigators received information that some witnesses reported seeing multiple fires burning in separate non-communicating areas, which could by itself be indicative of intentionally set fires. Through a scene examination and follow-up interviews with several witnesses, investigators were able to determine there was only one fire that began near Malia. By inviting witnesses back to the scene of the fire to meet with investigators, investigators and witnesses were able to walk through the scene together and witnesses were able to show investigators their vantage points of when and where they saw fire. Some of the witnesses acknowledged they had not seen separate fires burning and only saw the smoke from the original fire, which they mistakenly believed was another fire. Based on these follow-up interviews with witnesses, investigators were able to rule out multiple fires and were able to confirm there was only one fire.

95. At the time of this report, investigators do not possess any affirmative data to support a hypothesis that the Limassol Fire was intentionally set. Investigators followed a systematic approach to the scene investigation and in doing so, identified and recovered cigarette butts from the ignition area. No other items such as matches, lighter, or time delay device were located within the ignition area. Based on the above information, this cause hypothesis was excluded.

Smoking

96. Under ideal environmental conditions, carelessly discarded smoking materials can be a competent ignition source for receptive fuels. The total burn time of a cigarette is approximately 10 – 20 minutes, depending on the brand. Most people discard a cigarette that is almost totally consumed. Therefore, the fuel bed's typical exposure to heat is approximately 1 to 2 minutes.

97. It is known that cigarettes and even Fire Safe Cigarettes (FSC) can start a wildfire. For a cigarette to ignite a wildfire, specific environmental condition can affect the cigarette ignition potential but often, it is a combination of factors that affect the outcome. Some of the environmental factors that may affect the wildfire ignition potential of cigarettes include wind speed; low fuel moisture content (FMC), low relative humidity (RH); fuel size and orientation; orientation of the cigarette; and high air temperature to name a few.

98. Based on the known weather conditions at the time of the fire, investigators know the environmental conditions that were present were conducive to the ignition of a wildfire by carelessly discarded smoking material. While walking along the road, investigators located an excessive amount of cigarette butts along the edge of the road and into the neighboring vegetation. Although there was a large amount of cigarette butts present in the area, not all of the cigarette butts had thermal damage to them or in the nearby vegetation.

99. Through the use of witness statements and a systematic scene examination, investigators were able to identify and process a specific origin area. Within this specific origin area, investigators relied on the analysis of fire pattern indicators to narrow down the specific origin area to a more defined ignition area.

100. A search of the ignition area revealed several cigarette butts with one cigarette butt exhibiting minor thermal damage while another one exhibited severe thermal damage and was heavily impacted by fire. The damage was consistent with having been exposed to a longer duration and more intense burning.

101. As previously mentioned in the report, the probability of ignition was determined to be 100%. This was based on the environmental conditions recorded prior to the discovery of the fire. The environmental conditions present were extremely favorable to any ignition, including the ignition from carelessly discarded smoking materials. Based on the discovery of the thermally damaged cigarette butt within the ignition area coupled with the witness statements and a systematic fire scene examination, the hypothesis of carelessly discarded smoking material causing the Limassol Fire cannot be excluded.

CONCLUSION:

102. Based on the information available to the investigators at the time of this report, and after the examination and processing of the fire scene; reviewing witness statements, video and photographs; reviewing weather data, it is the opinion of SA/CFI Hill, as well as other participating investigators, that the Limassol Fire originated along the edge of the road (east side) between Malia and Arsos. The cause of the fire was a carelessly discarded cigarette coming into contact with dry vegetation.

103. The fire is classified as ***Accidental***.

FATALITIES AND INJURIES:

104. According to the Cyprus Police, there were two (2) fatalities associated with the fire and multiple injuries. The fatalities were in the same vehicle which had a registration number of HYK965. The vehicle was located facing south and was partially off the B8 road. The vehicle was located approximately 3.2 kilometers south of Monagri and 3.7 kilometers north of Alassa. The vehicle was registered to Maro Filippidis, and he was identified as one of the victims' of the fire along with her husband Dimitris Filippidis.

105. The Cyprus Police identified four (4) injuries related to the fire. The following injuries were identified:

- One female was driving her vehicle on the Platres – Lemesos Road, in the village of Monagri, on 23 July 2025, at around 2000 hours. She became surrounded by fire and suffered burns to her face, neck, and right upper limb, as well as irritation to her airways.
- One female suffered 1st Degree burns to her right hand while evacuating her house in the village of Malia at approximately 1400 hours on 23 July 2025.
- One male suffered burns while evacuating from his house between the villages of Vouni and Koilani at approximately 1700 hours on 23 July 2025.
- One male, suffering from chronic respiratory problems, was hospitalized for smoke inhalation after evacuating his house in the village of Vouni on 23 July 2025.

106. This origin and cause was reviewed by the following individuals:

SACFI/CES Lovin	SA/CFI McCormick
SA/CFI Shuford	SA/CFI Edmunds
EE Abraham INVF - Trainee	SA/CFI Noble