WITNESS STATEMENT

Criminal Procedure Rules, r27.2; Criminal Justice Act 1967, s.9; Magistrates' Courts Act 1980, s.5b

Statement of: WATTS, PAUL

Age if under 18: OVER 18 (if over 18 insert 'over 18') Occupation: CHIEF PILOT

This statement (consisting of 3 page(s) each signed by me) is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false, or do not believe to be true.

Signature: P WATTS Date: 11/12/2017

Tick if witness evidence is visually recorded ☐ (*supply witness details on rear*)

I am currently the Chief Pilot for the National Police Air Service (NPAS), working at multiple locations but primarily based in London at Lippits Hill. I have been flying since 1991 and was trained as a helicopter pilot in the Fleet Air Arm. I flew with a frontline carrier squadron, training squadron and finally as a Search and Rescue pilot. I was involved in a wide variety of rescue operations over land and sea as well as a support for UK SF operations and training. I joined the MPS as a pilot in August 1999 and flew as a police pilot in London until 2015. During this time I qualified as a helicopter instructor and examiner as well as completing a Master's Degree in Aviation Safety Management. I was Chief Pilot at the MPS when they transferred the Air Support Unit to the new National Police Air Service in March 2015 and TUPED across as the new NPAS Chief Pilot. I still regularly fly as an operational pilot in London and elsewhere in the UK.

All of NPAS pilots are highly experienced aviators; the minimum qualifications required to be a police pilot mean that NPAS recruits from a small pool of experienced pilots. These are mostly ex-military pilots whose experience and training is very relevant to police flying. The crews are experienced in making decisions in dynamic situations where life is at risk and the Lippitts Hill crews use a formal Dynamic Risk assessment process for recording decisions in situations that fall outside of normal operations. NPAS helicopters are not search and rescue assets and we do not routinely train for rescue operations (we do not carry a winch), however a helicopter is a very flexible tool and as an emergency service operator we do sometimes find ourselves in situations where we can offer assistance to persons in immediate life threatening danger. This usually involves the helicopter landing to deploy crew members to assist persons

on the ground; crews are first aid trained and most helicopters carry stretchers, first aid kits and defibrillators. Where the ground is unsuitable for landing crew members can be deployed (and recovered) whilst the aircraft is hovering a few feet above ground, this technique is known as "hover deplaning/ emplaning. Crews at NPAS London work closely with CTSFOs and can deploy to rooftops by fast rope or hover deplane, crews at other bases do not have this training.

There are two (2) types of helicopter that are used by NPAS — the EC135 and the EC145. The EC135 is smaller than the EC145 in both weight and person capacity. Considering flight weight and fuel, I'd consider the EC135 would have potential to carry one (1) extra person in addition to the pilot and Tactical Flight Officers, and the EC145 could carry two (2) additional people. All of the helicopters used by NPAS are fitted with cameras that can be controlled and moved by a TFO on board the helicopter. One of the cameras provides daylight images and another camera provides infrared images. Some of the helicopters have an additional camera option for low light images. The moving footage from the cameras can be streamed to the police control room, London Fire Brigade (LFB) command vehicles and units on the ground via a mobile downlink. Additionally, each of the helicopters are fitted with airwave radios covering four (4) airwave channels and two (2) air traffic control channels.

The helicopters have different cameras fitted and as such the quality of the cameras and the footage produced varies between helicopters. The infrared search camera does not provide a numeric temperature reading but shows variance in temperature via contrast. This can be set as the hotter temperatures appearing black and cooler temperatures white. However, this can be inverted as per the preference of the search camera operator. In general, the search cameras work best at a distance from the object of interest. If you get too close to the object that you are looking at, you restrict the angle and have a narrower field of view but equally you must be near enough to get the level of detail required. Typically for the best use of the search cameras the helicopter would be flown at an altitude between 800 to 2000 feet.

There are several factors considered before despatching a helicopter and whilst flying. Firstly, it must be legal and safe to fly considering both weather conditions and aviation regulations. There are clearly defined height limits for helicopters operating over urban areas and these are laid down in the NPAS Operations Manual; at night helicopters must not operate at less than 500ft above obstructions within 1 km, by day this reduces to 200ft (with a minimum altitude above ground of 300ft). Helicopters can operate below the height of a fixed object at night providing that it is lit, is not within 45 degrees of the front of the helicopter and the wind is within 45 degrees; however, the capabilities of the camera system ensure that helicopters do not normally operate at their minimum altitudes and can be expected to be

operating between 800ft and 2000ft depending on the type of camera, weather and airspace restrictions. Operating at such altitudes, the helicopter downwash would not have had an effect on the fire at Grenfell Tower, as a rule of thumb helicopter downwash has an impact at a distance equating to 3 times the rotor diameter (11m diameter for EC145 less for EC135).

The request to dispatch the helicopter would also be assessed by NPAS HQ via a Threat Harm Risk assessment as to whether the request warrants a helicopter. Finally, it is then the pilot's decision whether to fly or not. The crews and pilots are provided with a daily briefing that includes weather conditions, variability, safety notices, for example a new crane being erected, any aircraft details and crew fatigue, to help aid their decision making. Additionally, pilots have a set number of flying hours they must adhere to which will impact on their decision making.

Before and whilst flying the crew make dynamic risk assessments and decisions following the National Decision Making Model in which they are all trained. As mentioned above there is an additional Dynamic Risk Assessment matrix that is used by pilots based at Lippitts Hill London. This risk assessment matrix considers multiple factors: terrain, whether a day or night flight, Qualification Recency, hours flown, weather stability, task complexity, proximity to obstructions and serviceability of the aircraft and equipment.

It is routine for the London Fire Brigade (LFB) to request the assistance of NPAS for large fires and it is common for NPAS to be dispatched. The downlink provided by NPAS is utilised by LFB to provide an overview of a fire as a whole, identify trapped persons, assist their decision making in tackling the fire and help with access and egress. When dispatched to a fire the immediate action for the helicopter would be to identify the building or area in question and any persons that may be trapped. Especially in areas which may not be immediately visible to LFB officers on the ground, such as rooftops or confined spaces. Any information would be fed back to LFB either via direct radio contact to the LFB command vehicle or via police officers on the ground. The helicopter would then go into an orbital flight path around the fire and provide the downlink video stream. Additionally, the helicopter would monitor the debris from the fire and hotspots in the immediate area around the fire. This would be fed back to the LFB to highlight potential ignition points and prevent further fires.

Flying a helicopter near a fire causes several issues. Firstly, the hot air would affect the stability of the helicopter. Secondly, smoke from the fire could cause the helicopter engines to stall. This is called a 'flame out' and happens due to the smoke removing the oxygen and preventing ignition within the engine. The helicopter would not instantly drop out of the sky, it would go into auto rotation and effectively be

gliding. However, it would only glide a couple of hundreds of metres before coming to the ground. It is highly unlikely to land safely in such a situation, it would require clear open space and a bit of luck but it is still likely that the helicopter crew would be injured. The police helicopter crash at the Clutha Vaults pub, Glasgow in 2013 is a recent example of a crash resulting from a double engine flame out.

On the 8th December 2017 I attended New Scotland Yard and was shown images of Grenfell Tower by DC MORGAN. This included a photo of the roof of Grenfell Tower before the fire showing the layout of the roof and rooftop furniture. Having seen this photo I would not land a helicopter on the roof of Grenfell Tower. However, there does not appear to be any tall antenna that would prevent a helicopter hovering close to the upper roof area for a person to disembark from or embark onto the helicopter.

The other eighteen (18) photos that DC MORGAN showed me were screenshots from the footage recorded by the NPAS helicopters in attendance to Grenfell Tower during the fire. The screenshots showed the fire between 01:41am through to 06:06am and are a mix of daylight images and infrared images. From the first screenshot it is clear that the fire is significant and burning throughout the height of the tower on one side. It would be too dangerous to fly close to the tower or hover near to the roof. As a pilot I would be concerned about the heat from the fire, potential debris and the smoke. I would keep a distance from the tower and try and stay up wind of any smoke. A good distance would be around 0.5 nautical miles and an altitude range of 800 — 1500 feet. I would be checking for persons trapped on the roof and within the building by orbiting the tower and providing a downlink to the LFB on the ground. I would also be monitoring the large amount of debris falling from the tower. It is also a built up area so I would be monitoring for further potential ignition spots.

From the images I can see that the fire spreads to different sides of the building and goes onto the roof area, there was also hotspots on the tower roof. It is clear from the infrared images that the fire was producing a large amount of heat and debris. The smoke from the fire also came off vertically from the tower, which would prevent approaching the roof. As an experienced pilot I would not fly a helicopter close to the tower or attempt to hover close to the roof for people to try and get onto the helicopter. The risk posed by the heat, smoke and debris would be extremely high with the potential for an engine failure. With no open spaces within a couple of hundred metres it is highly likely that a double engine failure and subsequent autorotation would result in a helicopter crash. Not only could this kill the helicopter crew, it could kill and seriously injure people on the ground and severely hamper the emergency response to the fire.

Signature: P WATTS Signature witnessed by:
2018