

October 14, 2020

Mr. Benjamin Whitworth  
Vice President of Operations  
Children's Hospital New Orleans  
200 Henry Clay Avenue  
New Orleans, LA 70118

RE: New Helipad

Dear Benjamin:

I am writing at your request to provide a pilot's perspective as to why the use of the new helipad at Children's Hospital promotes both maximum safety and efficiency of operations. Please allow me to explain evidence which supports the new rooftop helipad as a safer option for both arrivals and departures.

Multiple factors had to be taken into consideration prior to takeoff or landing when pilots utilized the original helipad. A helicopter should land and depart into the wind to maximize both safety and performance. If the helicopter lands into the wind, wash from the rotor system trails behind the aircraft. This allows the helicopter to operate in clean, undisturbed air, thereby increasing the efficiency of the rotor system. In this scenario, the aircraft maintains necessary power in reserve to slow the descent for landing or maneuvering when necessary. In contrast, if a helicopter lands with the wind (also known as a "downwind landing"), the rotor wash is pushed under the aircraft, allowing turbulent air to recirculate in the rotor system. Under those circumstances, there could be a considerable reduction in efficiency and consumption of available reserve power, resulting in a condition called settling with power (a stalled condition of the rotor system). Impacts include rapid aircraft descent and unavoidable, abrupt ground contact; this is often a catastrophic event.

For these reasons, landing or departing into the wind is explicitly preferred over landing or departing with the wind. When there is no option to land into the wind, a pilot will try to avoid a downwind landing by utilizing a crosswind landing. Pilots employ the crosswind landing as a mitigation technique—however, modifications are never as safe as avoidance of the condition altogether by landing into the wind.

When we were using the original helipad, surrounding buildings limited arrival and departure directions. Pilots meticulously examined wind direction, giving this factor prudent consideration before every departure. If the wind was coming from the West, the pilot had to consider the effect the crosswind would have on takeoff. As the aircraft climbed to an altitude which allowed wind impact, the pilot had to counter the wind with the rotor system and tail rotor to prevent drifting to the East (over the parking area). Combating that wind during takeoff required the pilot to utilize additional aircraft power which could restrict the amount of weight the aircraft could carry and reduce the margin for error in the event of an emergency.

The new rooftop helipad permits pilots to depart into the wind, thereby enhancing aircraft efficiency due to a factor called effective translational lift. Most light helicopters experience a significant increase in productivity between 16 and 24 knots. If the helicopter is operated into a light wind (10 knots), the aircraft will only need to accelerate slightly to transition into effective translational lift (greater efficiency). This plays a huge role in reacting to emergency situations during a departure.

The discussion about operating the aircraft with favorable winds goes beyond takeoff and landing. If the pilot experiences an aircraft emergency while departing or arriving at the helipad, it is always safer to have additional performance capability. This capability is provided by the efficiency which accompanies operating into the wind. If we encounter an emergency situation while managing an approach or departure, we would always prefer to have more options available so the safest choice can be made. If we are performance-limited (forced to land downwind or with crosswinds), the options for safe recovery are limited. On the other hand, if the same emergency is encountered, but we have the wind in our favor (landing into the wind), we expand the opportunity to choose the best option (rather than the only option afforded due to the wind condition).

Operations around the fuel system and buildings also impact our ability to maneuver in an emergency. We mitigate that risk through careful planning, but if a catastrophic event were to occur, it would be compounded by the proximity of the fuel system and the buildings to the original helipad. That could cause an incident that would otherwise be isolated to the aircraft to impact others or the hospital itself.

Outside of pure safety considerations, the additional performance factors provided by operating from the new helipad location offer an added benefit for long range flights that require an increased fuel load.

In summary, from a Pilot, Check Airman/Instructor's perspective, the current helipad at the New Orleans's Children's Hospital allows for maximum potential in the areas of both safety and efficiency. The original helipad had many challenging components to work around such as wind hazards, obstacle and building avoidance, etc. The new rooftop helipad eliminates those components to afford pilots maximum safety and efficiency.

Best regards,

A handwritten signature in blue ink, appearing to be 'B. Bihler', with a large, stylized initial 'B' and a long horizontal stroke.

Brian Bihler  
Pilot/Check Airman/Director of Operations