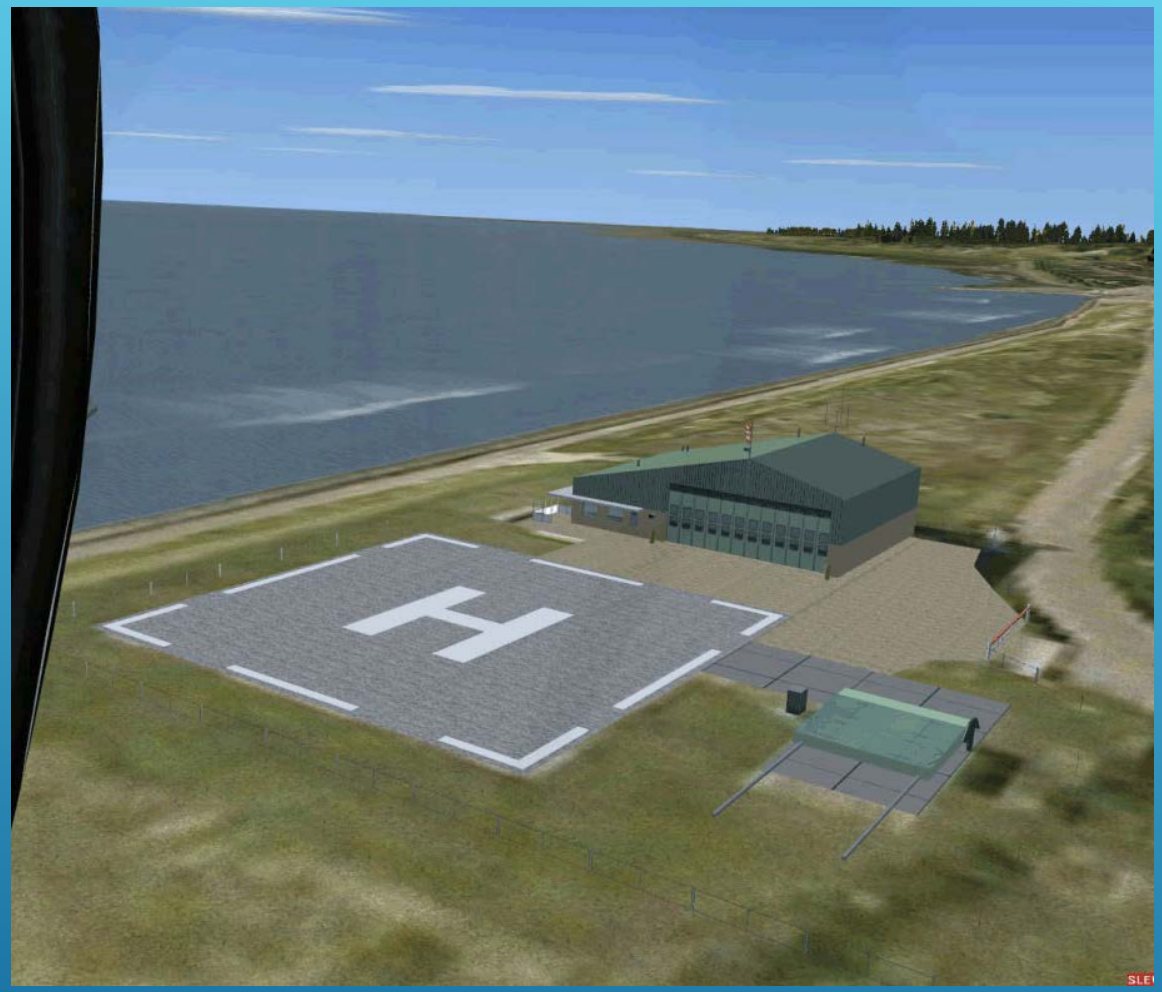
# PRIMARY OPERATORS CONCERNS REGARDING HELIPORT SAFETY

Capt. Don Williams



Helipads come in many shapes and sizes

# WHAT THE HELICOPTER PILOT WANTS

# What the helicopter pilot finds

Versatile Helicopter capability sometime requires operators to decide not if he can do the job but should he do the job.

Divide concerns into 3 areas

1.Environmental

2.Physical

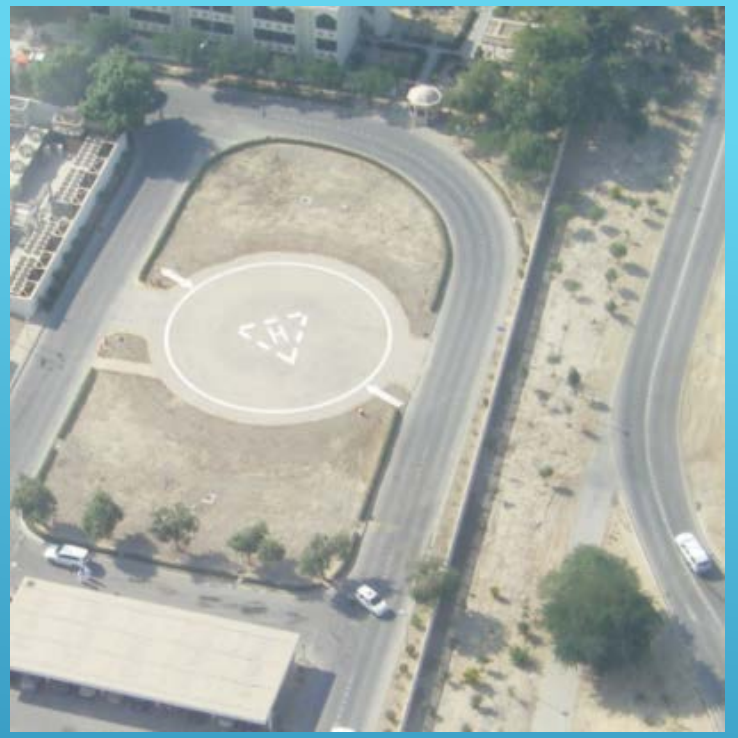
3.Personnel

# Environmental issues

1. Weather
   - Remote sites with limited weather reporting
   - Helipads covered with dust with potential brown out.
   - Sudden dust storms
   - High OAT = Reduced performance for confined areas
   - Related….Radio communication issues (flight following) Cell phone often better than Aviation VHF. (Sat phones, Satellite flight following, 0perational pressure to complete the flight in uncertain weather. (EMS and VIP flights) (telling pilots = No is not an option)

# Physical issues

1. Helipad size weight limit
   - Physical characteristic Concrete, Asphalt,
   - Aluminum, Steel
   - Big enough?
   - Used Regularly or Rarely
   - Who Maintains it



- Lighted?
- Night operations, Familiar with the area?
- Standard Perimeter lights with flood lights,  (Circle H)
- Glide slope indicator  (who checks it)
- Pilot controlled lights, Photo cell or Manual activation

# Fenced? People and animal control
# Control access the helipad, helps keep trash out


# CRASH /FIRE /RESCUE/ EQUPIMENT

Varies widely from single fire extinguisher to Deck Integrated Fire fighting System and Rapid Response Vehicles.




# OBSTRUCTIONS

How much Clearance do you need?

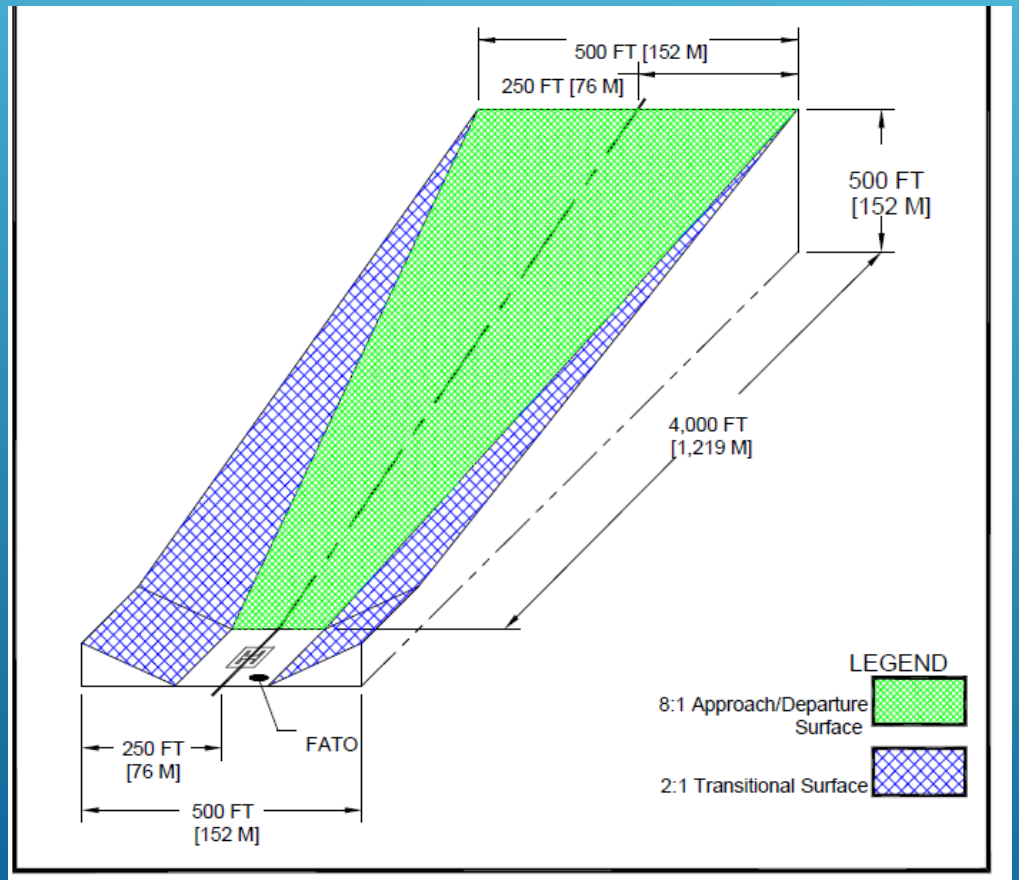



**Figure 2–7. VFR Heliport Approach/Departure and Transitional Surfaces: General Aviation**

EASY



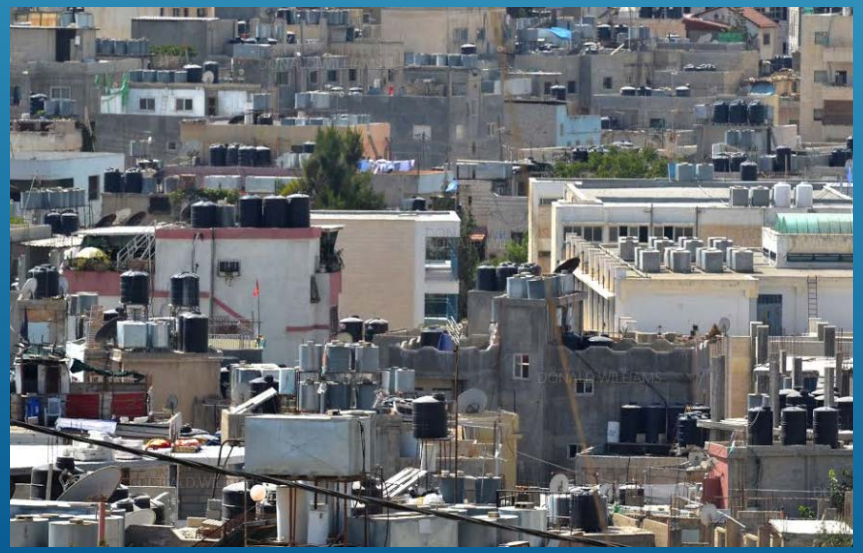
| Surface and dimensions | | Non-instrument (visual) FATO — Helicopter performance class 1 | 2 | 3 | Non-precision (instrument approach) FATO |
|---|---|---|---|---|---|
| APPROACH SURFACE | | | | | |
| Width of inner edge | | Width of safety area | | | Width of safety area |
| Location of inner edge | | Boundary | | | Boundary |
| *First section* | | | | | |
| Divergence | — day | 10% | 10% | 10% | 16% |
| | — night | 15% | 15% | 15% | |
| Length | — day | 245 m[a] | 245 m[a] | 245 m[a] | 2 500 m |
| | — night | 245 m[a] | 245 m[a] | 245 m[a] | |
| Outer width | — day | 49 m[b] | 49 m[b] | 49 m[b] | 890 m |
| | — night | 73.5 m[b] | 73.5 m[b] | 73.5 m[b] | |
| Slope (maximum) | | 8%[a] | 8%[a] | 8%[a] | 3.33% |
| *Second section* | | | | | |
| Divergence | — day | 10% | 10% | 10% | — |
| | — night | 15% | 15% | 15% | |
| Length | — day | c | c | c | — |
| | — night | c | c | c | |
| Outer width | — day | d | d | d | — |
| | — night | d | d | d | |
| Slope (maximum) | | 12.5% | 12.5% | 12.5% | — |
| *Third section* | | | | | |
| Divergence | | parallel | parallel | parallel | — |
| Length | — day | e | e | e | — |
| | — night | e | e | e | |
| Outer width | — day | d | d | d | — |
| | — night | d | d | d | |
| Slope (maximum) | | 15% | 15% | 15% | — |
| INNER HORIZONTAL | | | | | |
| Height | | — | — | — | 45 m |
| Radius | | — | — | — | 2 000 m |
| CONICAL | | | | | |
| Slope | | — | — | — | 5% |
| Height | | — | — | — | 55 m |
| TRANSITIONAL | | | | | |
| Slope | | — | — | — | 20% |
| Height | | — | — | — | 45 m |

a. Slope and length enables helicopters to decelerate for landing while observing "avoid" areas.
b. The width of the inner edge shall be added to this dimension.
c. Determined by the distance from the inner edge to the point where the divergence produces a width of 7 rotor diameters for day operations or 10 rotor diameters for night operations.
d. Seven rotor diameters over-all width for day operations or 10 rotor diameters over-all width for night operations.
e. Determined by the distance from inner edge to where the approach surface reaches a height of 150 m above the elevation of the inner edge.

Table 4-1. Dimensions and slopes of obstacle limitation surfaces

Confusing

# Typical Obstructions



# Unexpected Obstructions and helipad FOD

# Personnel

- Helipad Crew -who will be there?
  - Helicopter Landing Officers or Helipad Assistant/Handlers-Trained/Experienced?
  - Pilot assists the passengers?
  - Crash fire rescue personnel
  - Recurrent training

# Personnel

- Passengers
  - Frequent flyers or First time
  - Passenger Briefings, Helipad Conduct, In flight conduct, Landing Conduct,
  - Control the passengers


# Summary

- Weather,
- Physical Characteristics of Pad
- Obstruction Clearances
- Helipad Equipment
- Helipad Personnel
- Passengers


# THANK YOU