Special VFR

A number of aircraft accidents have taken place in meteorological conditions which were lower than required but legalised by a provision of a special clearance called '**Special VFR**'(SFR). This normalization of deviance has not been assessed for risk, experience levels of the pilot and the training requirements prescribed to mitigate the risk.

Acceptable level of safety

Logically, instrument approach below CAT I minima is permitted but with a higher level of training & equipment redundancy, protection so as to ensure same level of safety as a CAT I approach.

On the other hand for VFR flights, operating in conditions below VFR(SFR) there is no special training requirement, risk assessment methodology and flight procedures prescribed. Post a number of accidents on the helicopters operating in India, the regulator mandated training for helicopter pilots to undergo special VFR training but not for fixed wing aircraft but there are no flight simulators and the training on flight simulator requirement is frequently waived off by the regulator.

NTSB recommendation for Terrain Warning System

The National Transportation Safety Board today called on the Federal Aviation Administration to require all U.S.-registered turbine-powered helicopters certificated to carry at least 6 passengers to be equipped with a terrain awareness and warning system. The recommendation is one of five contained in the final report of a fatal helicopter accident in the Gulf of Mexico.

On March 23, 2004, an Era Aviation Sikorsky S-76A helicopter, N579EH, crashed into the Gulf of Mexico ,Texas. Although visual meteorological conditions existed, it was a dark night with very few external visual cues. The aircraft was transporting eight oil service personnel to the Trans-ocean drilling ship Discoverer Spirit; they and the two pilots perished in the crash.

Flights needing to depart and arrive under lower than VFR conditions ask for clearance to fly in conditions below the minimum 5km visibility limit. A special VFR approval is granted by the Air Traffic Controller.

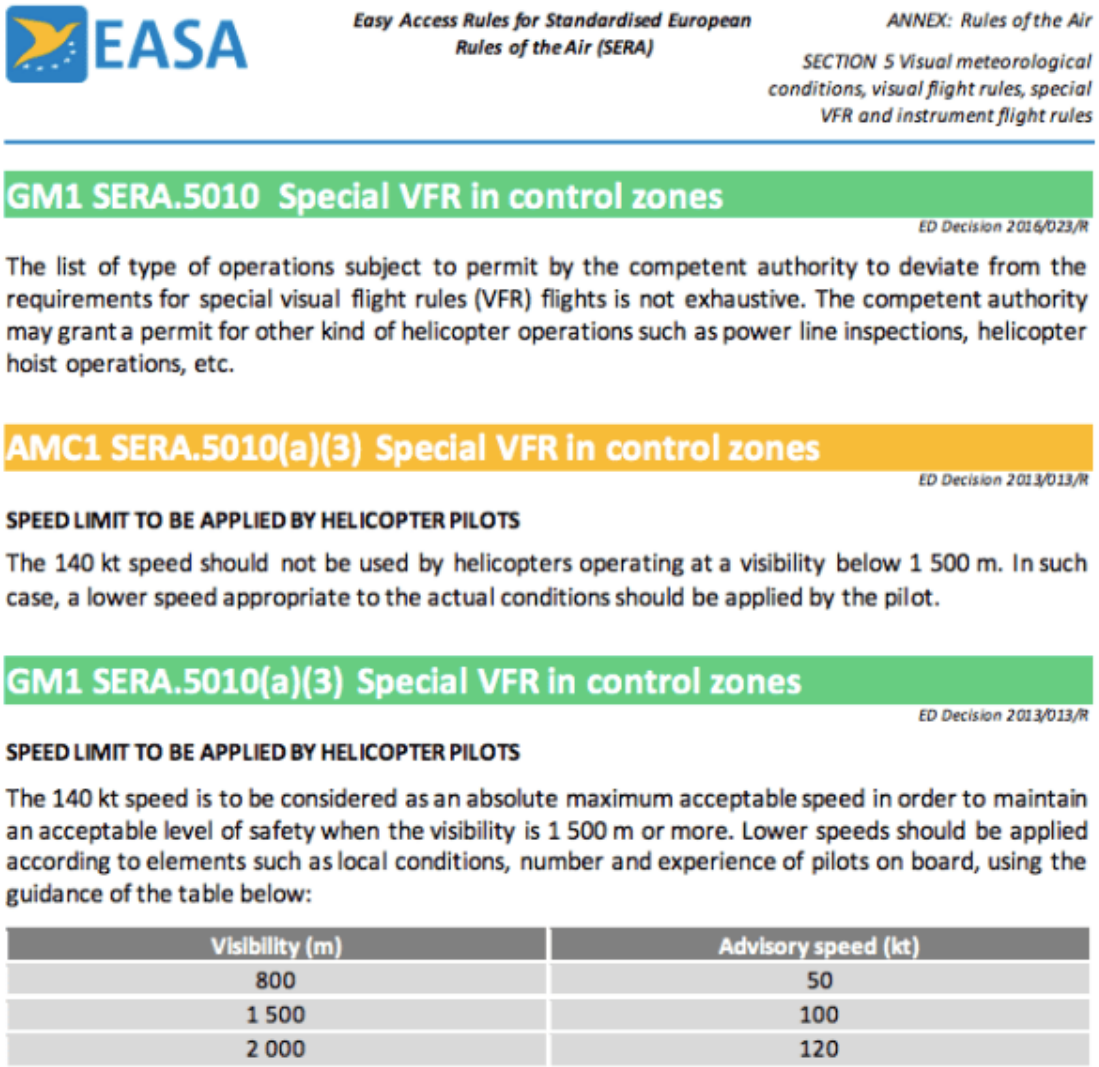
How much lower can the limit for the visibility be below 5km and is there a defined cloud ceiling?

ICAO: When so prescribed by the appropriate ATS authority: flight visibilities reduced to not less than 1 500 m may be permitted provided certain conditions are met with.

For Helicopters: Helicopters may be permitted to operate in less than 1500 m flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

Surprisingly, ICAO does not prescribes a lower limit! EASA on the other hand limits the visibility to 800m and has laid down advisory for speed/visibility. ICAO does not specify a ceiling which is then assumed to be the VFR ceiling but EASA has limited to 600ft for

takeoff and landing, other phases, clear of clouds.



EASA

Easy Access Rules for Standardised European Rules of the Air (SERA)

ANNEX: Rules of the Air

SECTION 5 Visual meteorological conditions, visual flight rules, special VFR and instrument flight rules

GM1 SERA.5010 Special VFR in control zones

ED Decision 2016/023/R

The list of type of operations subject to permit by the competent authority to deviate from the requirements for special visual flight rules (VFR) flights is not exhaustive. The competent authority may grant a permit for other kind of helicopter operations such as power line inspections, helicopter hoist operations, etc.

AMC1 SERA.5010(a)(3) Special VFR in control zones

ED Decision 2013/013/R

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt speed should not be used by helicopters operating at a visibility below 1 500 m. In such case, a lower speed appropriate to the actual conditions should be applied by the pilot.

GM1 SERA.5010(a)(3) Special VFR in control zones

ED Decision 2013/013/R

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt speed is to be considered as an absolute maximum acceptable speed in order to maintain an acceptable level of safety when the visibility is 1 500 m or more. Lower speeds should be applied according to elements such as local conditions, number and experience of pilots on board, using the guidance of the table below:

Visibility (m)	Advisory speed (kt)
800	50
1 500	100
2 000	120

EASA regulation Special VFR

History.

With the introduction of airspace restrictions in the late 1960s, military aerodromes close to large international aerodromes, specifically Northolt in proximity to the rapidly

expanding Heathrow, found that IFR procedures were mandatory in the new control zones when previously VFR procedures were generally accepted.

In order to allow aeroplanes to fly into and out of Northolt (in the then Heathrow Special Rules Zone) a procedure based on a corridor in which visual navigation was required was set up. Providing the pilot could see the ground, he could navigate and provided he remained clear of cloud he could avoid collisions. A system of 'not quite' IMC or special VFR was invented.

Until the late 1970s this was applied in what was known as the Northolt special VFR corridor. It was expanded to include the general aviation aerodrome at Denham and its advantages for aeroplanes and pilots unable to comply with IFR were obvious. When the classes of airspace (A – G) were introduced, ICAO also adopted the special VFR as a procedure with appropriate international amendments.

Source: CAE Oxford

Kobe Bryant accident

Weather conditions in Los Angeles were so treacherous when Kobe Bryant's helicopter crashed this morning, killing all nine people on board, that local law enforcement had decided to ground all air support.

The pilot of the helicopter that crashed and killed all nine people aboard, including Kobe Bryant, radioed that he was climbing to 2,300 feet to avoid a cloud layer, then descended in a left turn before slamming into a mountainside.

Flights continue to operate in busy airspace without established corridors which are away

from obstacles and high mountains/terrain.

The original intent of the Heathrow Special Rules Zone was to facilitate air traffic which couldn’t fly IFR through a corridor. The intent is to maintain separation from obstacles, populated areas and other traffic.

mindFly analysis

The provision of special VFR has been misinterpreted. The origin was due to a need to segregate traffic flying VFR to facilitate the movement in and out of the airports when the rest of the traffic is maintaining IFR. Separate corridors were made to channelize the traffic but now they are all using the same airspace under the respective ATC monitoring & control.

However, it is the pilots responsibility to adhere to safety norms while keeping clear of the cloud ceiling. The regulator needs to assess the risk at various airports, devise corridors that can be flown with prevailing visibility below VFR requirements.

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