



Civil Aviation Authority  
**SAFETY NOTICE**  
Number: SN-2019/001



Issued: 06 March 2019

**Risk of Controlled Flight into Terrain during 3D BARO-VNAV and  
2D Approaches  
(Altimeter Setting Procedures)**

**This Safety Notice contains recommendations regarding operational safety.**

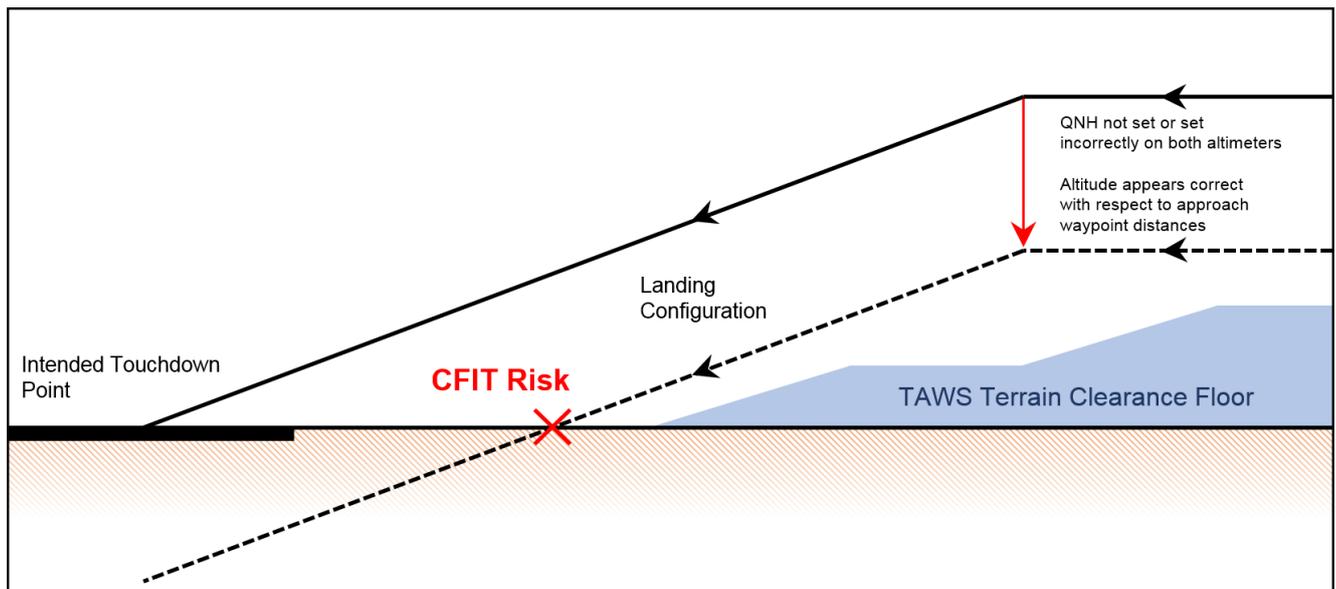
Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

<b>Applicability:</b>	
<b>Aerodromes:</b>	Not primarily affected
<b>Air Traffic:</b>	All Air Traffic Control Staff
<b>Airspace:</b>	Not primarily affected
<b>Airworthiness:</b>	Not primarily affected
<b>Flight Operations:</b>	All Operators and Pilots
<b>Licensed/Unlicensed Personnel:</b>	All ATOs and Registered Training Facilities

## 1 Introduction

- 1.1 The purpose of this Safety Notice is to draw attention to the risk of Controlled Flight into Terrain (CFIT) when flying instrument approach operations with the pressure altimeter sub-scale set to an incorrect pressure setting.
- 1.2 Non-precision approach procedures (NPAs) and approach procedures with vertical guidance (APVs) rely heavily on the accuracy of altitude information provided by the pressure altimeters. If the appropriate pressure setting is set incorrectly on the altimeter sub-scale, the aircraft could be significantly above or below the safe vertical profile as determined by the procedure.
- 1.3 The risk of setting incorrect QNH may increase considerably in a congested radio environment, during times of high cockpit workload, or when transitioning from a Standard Terminal Arrival Route (STAR).
- 1.4 It is emphasised that a Terrain Awareness Warning System (TAWS) may not provide a ground proximity warning (i.e. 'PULL UP' alert) close to an aerodrome when the aircraft is in the landing configuration.

## 2 Diagram



## 3 Actions to be Taken

- 3.1 Pilots should use effective Threat & Error Management (TEM) techniques to identify and mitigate against incorrect altimetry when preparing to fly an approach that relies directly on an accurate pressure altimeter sub-scale setting; (e.g. BARO-VNAV, IAN, MANAGED and 2D approaches).
- 3.2 Operators should ensure Standard Operating Procedures (SOPs) maximise Situational Awareness (SA) and make use of all available sources of information.
- 3.3 Flight Crew Training should include the effect of aircraft configuration on TAWS alerts and emphasise that approaches conducted with an incorrect pressure altimeter sub-scale setting may lead to CFIT without a prior TAWS ground proximity warning.

## 4 Queries

- 4.1 Any queries or requests for further guidance resulting from this communication should be addressed to [commsflightops@caa.co.uk](mailto:commsflightops@caa.co.uk).

## 5 Cancellation

- 5.1 This Safety Notice will remain in force until further notice.