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WEATHER DEVIATIONS AND REPORTING BACK ON ROUTE

1. INTRODUCTION

1.1 This document provides guidance for flight crews on the procedures associated with requesting weather deviations as well as reporting back on route on completion of the weather deviation.

1.2 While this document is primarily aimed at CPDLC operations, the procedures contained herein also generally apply to the voice environment. Any described CPDLC procedures are also documented in the Global Operational Data link Document (GOLD) available at http://www.icao.int/apac.

2. OFFSET VS WEATHER DEVIATION CLEARANCES

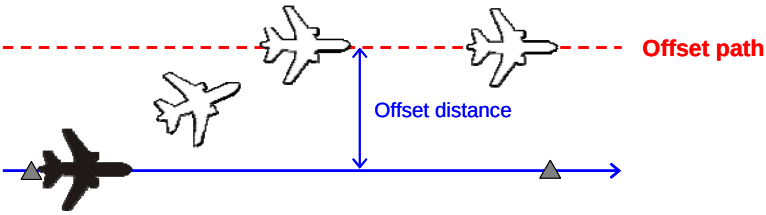
2.1 When using CPDLC there are two message elements that support a flight crew requesting an off track clearance:

a. REQUEST OFFSET [dist] [dir] OF ROUTE
b. REQUEST WEATHER DEVIATION UP TO [dist] [dir] OF ROUTE

2.2 While similar in structure, these two clearance requests have different meanings as described below.

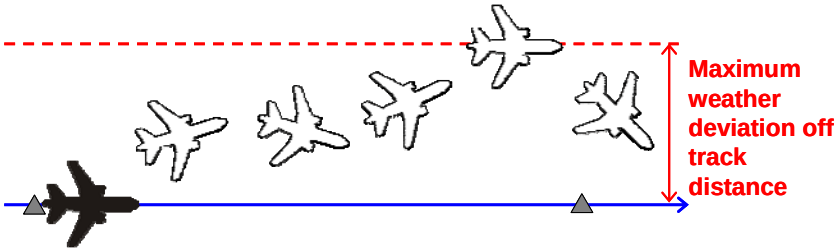
2.2.1 **Offset clearance**
An offset clearance authorises the flight crew to operate the aircraft so as to intercept a path offset to the cleared route and then fly along that offset path. A further clearance is required to deviate off this offset path

or to return to the cleared route. Because of the risk of error, many ATS Units will not issue offset clearances.



2.2.2 **Weather deviation clearance**

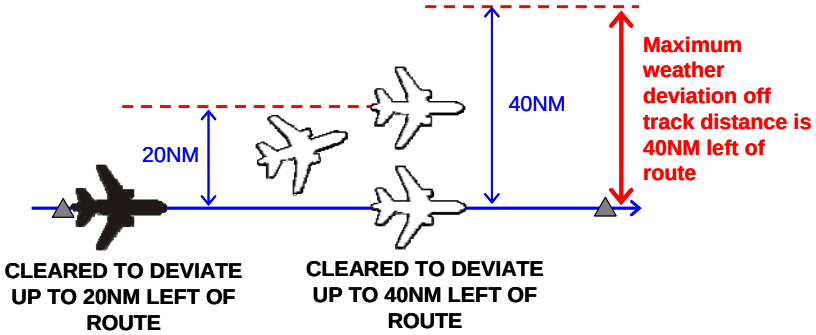
A weather deviation clearance authorises the flight crew to operate anywhere up to the specified distance (and in the specified direction) from the cleared route.



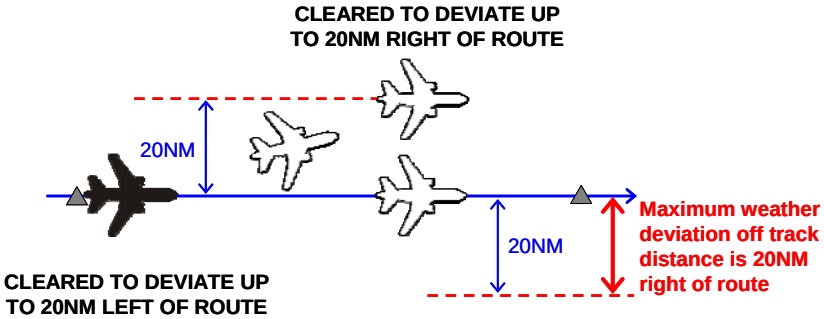
Note: On occasions requests for headings are received for weather avoidance. Outside ATS surveillance (radar/ADS-B) coverage, controllers cannot issue a heading clearance to an aircraft. Flight crews should ensure that the correct type of clearance is requested.

3. MULTIPLE WEATHER DEVIATION CLEARANCES

3.1 A weather deviation clearance replaces any existing weather deviation clearance. For example if an aircraft is cleared to deviate up to 20NM left of route, and then subsequently requests (and is cleared) 40NM left of route, the current weather deviation clearance becomes 40NM left of route (i.e. not 60NM left of route).



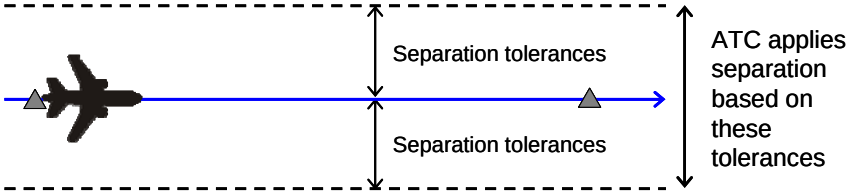
3.2 If an aircraft is cleared to deviate 20NM left of route, and then subsequently requests (and is cleared) 20NM right of route, the current weather deviation clearance becomes 20NM right of route (i.e. not 20NM left and right of route).



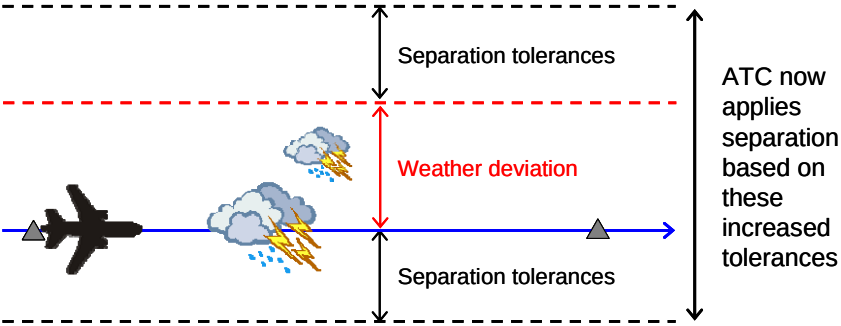
Note: In the above scenario, when the aircraft is cleared to deviate to the right of route, the previous clearance to deviate to the left of route is automatically cancelled

4. ATC SEPARATION FOR AIRCRAFT DEVIATING OFF CLEARED ROUTE

4.1 Outside ATS surveillance coverage, ATC applies separation between aircraft based on the separation tolerances associated with the aircraft.



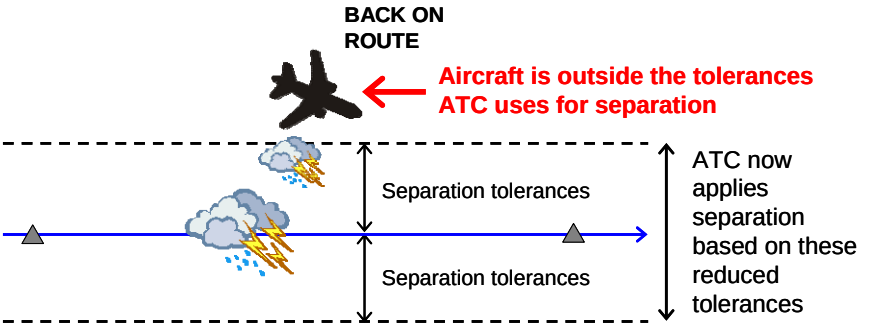
4.2 When an aircraft is subject to a weather deviation, ATC increases the separation that is applied to the aircraft by the size and direction of the weather deviation.



4.3 When an aircraft reports back on route, the additional weather deviation tolerances are no longer applied.

On a number of occasions, flight crews have reported 'back on route' before they are established back on the cleared route. This leads to a discrepancy between the "cleared route" that ATC is basing separation on, and the actual flight path of the aircraft.

If an aircraft reports back on route before it has returned to the cleared route, this may result in the aircraft not being correctly separated from other aircraft in the vicinity. This error usually occurs when the aircraft passes the weather and is tracking direct to a subsequent waypoint on the cleared route.

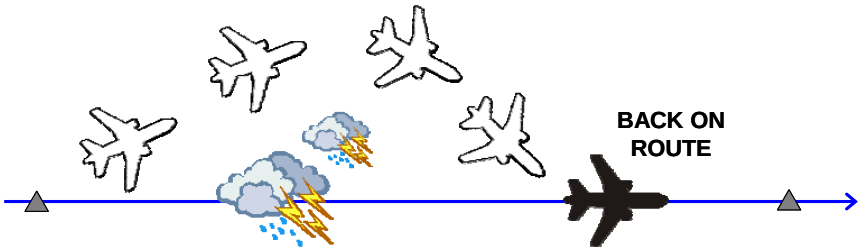


Note: ATC separation is based on maximum weather deviation off track, which is why headings cannot be approved to aircraft outside of ATS surveillance coverage.

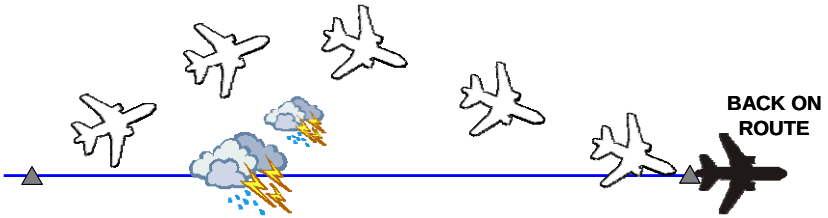
5. REPORTING BACK ON ROUTE

5.1 The following procedures concerning reporting back on route are contained in GOLD 5.7.4, and describe three situations when it is appropriate to send a BACK ON ROUTE report. When sending a BACK ON ROUTE report, flight crews should ensure that the correct preformatted message element is used (when it is available), rather than free text.

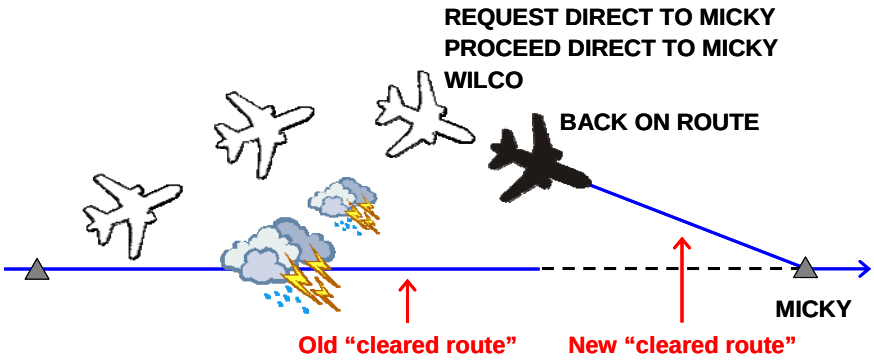
a. When the flight crew no longer requires the deviation clearance and has returned to the cleared route, the flight crew should send a BACK ON ROUTE report.



b. If the aircraft is off route during a weather deviation clearance and proceeding direct to a waypoint on the cleared route, the flight crew should not send a BACK ON ROUTE report until after the aircraft has sequenced the waypoint and is on the cleared route.

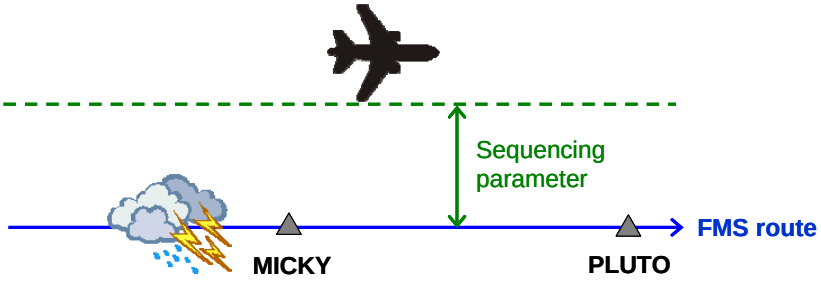


c. If during the weather deviation, the flight crew receives and accepts a clearance to proceed direct to a waypoint, the cleared route becomes the route between the aircraft and the waypoint. Therefore, the flight crew should send a BACK ON ROUTE report after they execute the “direct to” clearance.

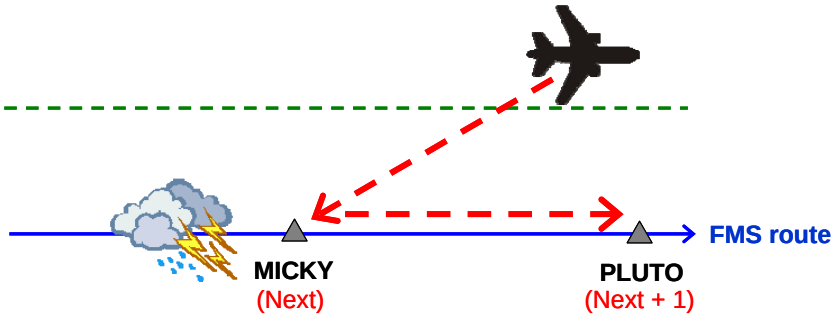


6. SEQUENCING WAYPOINTS WHILE OPERATING OFF TRACK

6.1 If an aircraft passes abeam a waypoint by more than a certain distance (depending on aircraft type) whilst operating in heading/track mode, the waypoint will not be sequenced in the FMS. As well as providing incorrect estimate data to the flight crews, this results in erroneous information in ADS-C reports being transmitted to ATC. (GOLD 5.6.1.1)



6.2 If MICKY is not manually sequenced in the FMS by the flight crew, estimates calculated by the FMS will be based on the aircraft flying back to MICKY and then onwards to PLUTO. In many ATC automation systems the ADS-C information downlinked to ATC will also indicate that the aircraft is flying backwards to MICKY.



6.3 When operating off track, flight crews should manually sequence waypoints that are not automatically sequenced by the FMS.

7. CANCELLATION

7.1 This AIC is expected to cancel on 1705301600UTC.

8. DISTRIBUTION

8.1 By Airservices Australia website only.