

Ground Movement Handling of Large Passenger and Cargo Carrying Aircraft

Airside Operation Instruction 06

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1 GROUND MOVEMENT HANDLING OF CODE F PASSENGER CARRYING AIRCRAFT

1.1 Introduction

- a. ICAO Annex 14 – Volume 1 (Aerodrome Design and Operations) gives reference to aircraft from code A upwards. Each code designates specific aircraft wingspan/outer main gear wheel span dimensional parameters.
- b. The largest recognised aircraft dimensional code in ICAO Annex 14 – Volume 1 (Aerodrome Design and Operations) is currently code F, which relates to those aircraft with a wing span from 65 metres up to but not including 80 metres. i.e. Airbus A380 (79.80m).
- c. Aircraft with dimensions greater than code F i.e. Antonov 225 (88m), are not currently classified within ICAO Annex 14 – Volume 1 (Aerodrome Design and Operations).

1.2 Objectives

- a. EMA ensures that at all times the ground movement handling of specific Code F passenger carrying aircraft, namely Airbus A380 is carried out in accordance with Operational Safety Management Assessments documented (in Safety Assurance Document 16) and approved by the CAA (SARG).
- b. Ground movement handling of passenger carrying Airbus A380's would also be carried out as detailed above, although it should be noted these aircraft would only operate into EMA under diversionary or emergency circumstances.
- c. EMA ensures that, during ground movements, safety margins of code F aircraft are maintained for both aircraft to aircraft and aircraft to obstacles.
- d. EMA ensures that aircraft parking arrangements are carried out with due regard to safe distances maintained between code F aircraft and obstacles, as detailed in EASA CS-ADR-DSN.E.365 which states that "the minimum clearance between an aircraft using the stand and any adjacent building, aircraft on another stand and other object as being 7.5m for a code F aircraft".

1.3 Ground Movement Handling (System Description)

- a. Operational functions included within the ground movement procedure are aircraft landing, aircraft arrival, aircraft parking, aircraft departure and aircraft take-off. Responsibility for these functions lies with both Air Traffic Control (Ground Movement Control) and Airfield Operations. Air Traffic Control safety/operating functions are contained within EMA MATS (Part 2).
- b. Airfield Operations safety/operating functions are obstacle clearance marshallers, aircraft marshallers (if required) and wildlife control duties. Stand allocation is undertaken by the EMA Control Room.

1.4 Ground Movement Handling. (Operational Procedures)

- a. Aircraft Landing.

Procedures to be carried out upon the landing of an aircraft of code F dimensions, on either runway 09 or 27, are as follows:

- i. Whilst the aircraft is on 'final approach' or the runway, in order to maintain the correct safety separation, the 'Alpha' Taxiway should be restricted to use by code D (or smaller) aircraft only.
 - ii. Additional runway inspections may be required after landing, at the request of ATC.
- b. Aircraft Arrival (Runway 09 Landing)

Procedures to be carried out whilst a code F aircraft is taxiing are as follows:

- i. The aircraft should vacate the runway via taxiway 'Alpha' and re-enter via taxiway 'Whiskey', backtracking on the runway to vacate at taxiway 'Hotel'. (See Appendix 5).
 - ii. To allow correct aircraft/obstacle separation, upon vacating via taxiway 'Alpha', the following should be instigated:
 - The perimeter track road should be closed and cleared of traffic between the East Apron intersection and a point abeam the end of the runway.
 - An aircraft guidance marshall should also be positioned to the south of and abeam the 'Whiskey' taxiway. (See Appendix 1).
 - iii. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.
 - iv. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The Airfield Operations Supervisor (AOS) should then carry out an inspection of the taxiway used.
- c. Aircraft Arrival (Runway 27 Landing)

Procedures to be carried out whilst a code F aircraft is taxiing are as follows:

- i. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.
- ii. The aircraft should vacate the runway via either taxiway Golf or Hotel, joining the 'Alpha' taxiway and should then enter the West Apron through the 'Foxtrot' bellmouth. (See Appendix 1).
- iii. Whilst the aircraft is on the 'Alpha' taxiway and in order to maintain correct safety separation, the 'Bravo' Taxiway on the West Apron, (between the 'Bravo' hold and abeam the 'Golf' taxiway), should be restricted to use by code D (or smaller) aircraft only.

- iv. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out an inspection of the taxiway used.
- d. In Low Visibility, the procedures as listed above, together with full Cat. 3-runway/taxiway lighting should be followed.
- e. Aircraft Parking (Runway 27 and 09 Landing)

Procedures to be carried out whilst parking an aircraft, of code F dimensions.

- i. Code F aircraft with dimensions of no greater than 73.30m (i.e. An124) should be positioned on either stands 107, 109 or 111 (as per standard parking procedures).
 - ii. Aircraft with dimensions greater than 73.30m should be parked/positioned on stand 107 (stands 106 and 108 should be vacant, stand 105 and 109 downgrade to an B757-200W or smaller aircraft).
 - iii. During this part of the procedure the aircraft will be under full marshall control until shut down on stand.
 - iv. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out a FOD inspection of the taxiway/apron used.
- f. Aircraft Departure

Procedures to be carried out prior to and during departure of an aircraft of code F dimensions are as follows:

- i. Aircraft with dimensions of greater than 73.30 (inc. those greater than 73.30) should pushback as per standard procedures.
 - ii. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out a FOD inspection of the taxiway/apron.
- g. Aircraft Take-Off (Runway 09 departure)
- i. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, both the runway and Bravo Taxiway on the West Apron, (between the 'Bravo' hold and abeam the 'Golf' taxiway) should be restricted to use by code D (or smaller) aircraft only.
 - ii. The aircraft should enter the runway via taxiway Golf, (See Appendix 1).
- h. Aircraft Take-Off Runway 27 Departures.
- i. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, both the runway and Bravo Taxiway on the West Apron, (between the

- 'Bravo' hold and abeam the 'Golf' taxiway) should be restricted to use by code D (or smaller) aircraft only.
- ii. The aircraft should enter the runway via taxiway 'Golf' or 'Hotel' and back-track, and vacate via taxiway 'Whiskey'.
 - iii. To allow correct aircraft/obstacle separation, upon vacating the runway the following should be instigated:
 - The perimeter track road should be closed and cleared of traffic between the East Apron intersection and a point abeam the end of the runway.
 - An aircraft guidance marshall should be positioned on the Alpha taxiway adjacent to and south of, the "Alpha 2" stop-bar.
 - iv. The aircraft will, subject to meeting the above requirements, traverse along the Alpha taxiway and at holding point 'Alpha 1' obtain ATC approval to re-enter the runway, (See Appendix 1).
 - v. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.
- i. Safety communications.
 - i. During the ground movement procedure of code F aircraft, communications between ATC (GMC) and Airfield Operations are to be maintained and required procedures followed at all times.

2 Ground Movement Handling of Large Cargo Aircraft (LCA)

- i. Freight aircraft with a wing span from 65 metres up to but not including 80 metres are defined as 'Large Cargo Aircraft', specifically these aircraft are the Antonov 124 and Boeing 747-8F.
- ii. Procedurally these aircraft can be handled as per code E passenger carrying aircraft, however certain restrictions apply. **No movement of aircraft on North Edge of Central Apron whilst LCA on Alpha Taxiway.**
- iii. Additional LCA procedures and relevant restrictions are contained within Safety Assurance Document 063 'Ground Movement of Large Cargo Aircraft'.

3 Ground Movement Handling of Above Code F Aircraft

- 3.1 EMA ensures that at all times the ground movement handling of above Code F aircraft, namely the Antonov 225, is carried out in accordance with Operational Safety Management Assessments documented (within the Safety Assurance Document 002) and approved by the CAA (SRG).

3.2 Ground Movement Handling (System description)

- a. Operational functions included within the ground movement procedure are aircraft landing, aircraft arrival, aircraft parking, aircraft departure, and aircraft take-off.
- b. Responsibility for the Operational Safety of these functions lies with both Air Traffic Control (Ground Movement Control) and Airfield Operations. Air Traffic Control safety/operating functions are contained within EMA MATS (Part 2).
- c. Airfield Operations safety/operating functions are obstacle clearance marshallers, marshallers (if required) and wildlife control duties. Aircraft stand allocation is undertaken by the EMA Control Room.

3.3 Ground Movement Handling (Operational Procedures)

a. Aircraft Landing.

Procedures to be carried out upon the landing of an aircraft of above code F dimensions (on either runway 09 or 27) are as follows:

- i. Whilst the aircraft is on 'Final Approach' or on the runway, in order to maintain correct safety separation, the 'Alpha' Taxiway should be restricted to use by code D (or smaller) aircraft only.
- ii. An additional runway inspection will be required after landing.

b. Aircraft Arrival (Runway 09 Landing)

Procedures to be carried out whilst an aircraft of above code F dimensions is taxiing are as follows:

- i. The aircraft should vacate the runway via taxiway 'Alpha' and re-enter via taxiway 'Whiskey', backtracking on the runway to vacate at taxiway 'Hotel'. (See Appendix 2).
- ii. An additional runway inspection will be required after this manoeuvre; however this may be incorporated within the above inspection provided there are no other arrival or departures between the 'above code F' aircraft landing and backtracking.
- iii. To allow correct aircraft/obstacle separation, upon vacating via taxiway 'Alpha', the following should be instigated:
 - The perimeter track road should be closed and cleared of traffic between the East Apron intersection and a point abeam the end of the runway.
 - An aircraft guidance marshall should be positioned south of and abeam the whiskey taxiway.
- iv. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.

- v. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out an inspection of the taxiway used.
- c. Aircraft Arrival. (Runway 27 Landing).

The procedures to be carried out for an above code F aircraft taxiing are:

- i. The aircraft should vacate the runway via either taxiway Golf or Hotel, joining the 'Alpha' taxiway and should then enter the West Apron through the 'Foxtrot' bell-mouth. (See Appendix 2)
- ii. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.
- iii. Whilst the aircraft is on the 'Alpha' taxiway and in order to maintain correct safety separation, the 'Bravo' Taxiway on the West Apron, (between the 'Bravo' hold and abeam the 'Golf' taxiway), should be restricted to use by code C (or smaller) aircraft only.
- iv. To mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out an inspection of the taxiway used.
- d. In Low Visibility, the procedures as listed above, together with full Cat. 3-runway/taxiway lighting should be followed.
- e. Aircraft Parking. (Runway 27 & 09 Landing).

Procedures to be carried out whilst parking an aircraft of above code F dimensions are:

- i. Aircraft with dimensions greater than 80m should be parked on stand 107 (stands 106 and 108 should be vacant, stand 105 and 109 downgrade to an B757-200W or smaller aircraft).
- ii. During this part of the procedure the aircraft will be under full marshall control until shut down on stand.
- iii. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out a FOD inspection of the taxiway/apron used.
- f. Aircraft Departure.

Procedures to be carried out prior to and during departure of an aircraft of above code F dimensions are:

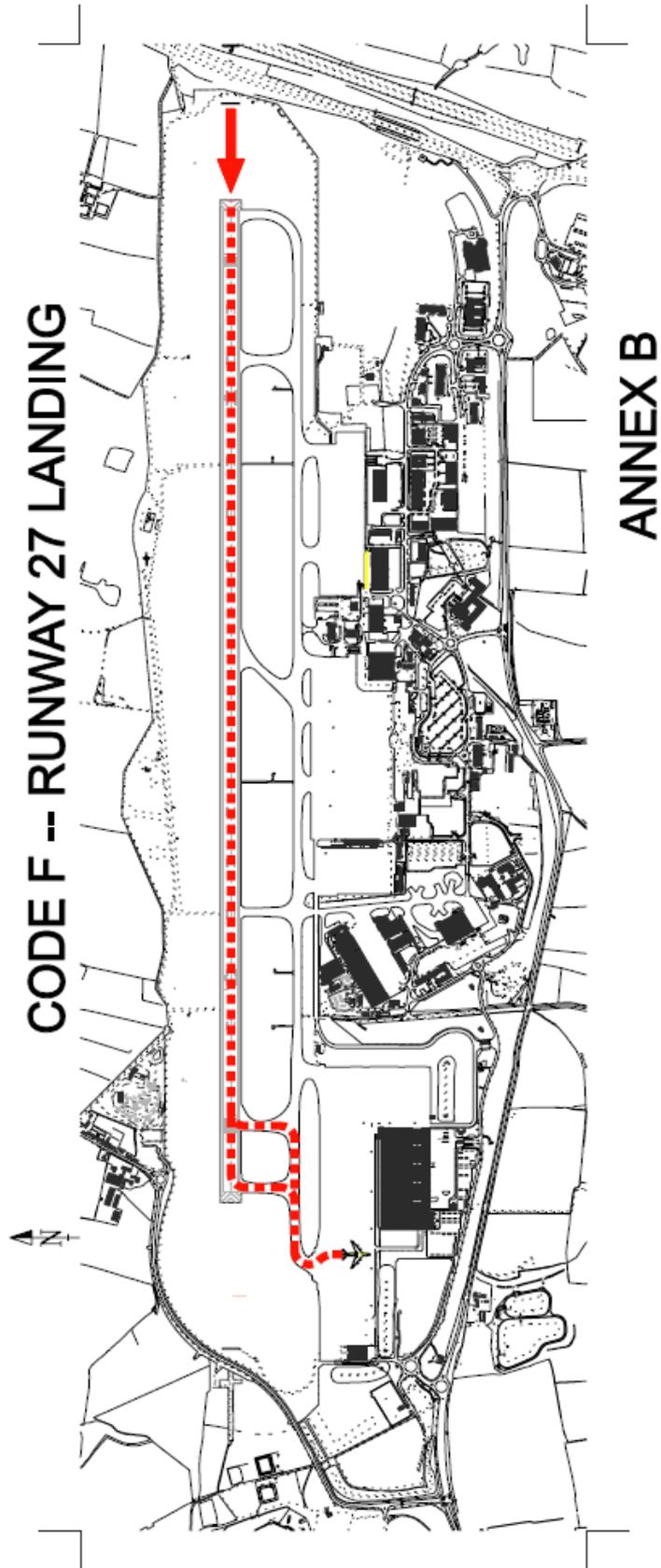
- i. Aircraft with dimensions of 80m or more may pushback as per standard procedures.

- ii. In order to mitigate the effects of jet blast and FOD problems, ATC should instruct the aircraft to operate on minimum engine thrust whilst manoeuvring. The AOS should then carry out a FOD inspection of the taxiway and apron.
- g. Aircraft Take-Off Runway 09 departure
- i. In order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft 'only', whilst the above code F aircraft is on the 'Alpha' taxiway.
 - ii. In order to maintain correct safety separation, whilst the above code F aircraft is on the 'Alpha' taxiway the Bravo Taxiway on the West Apron, (between the 'Bravo' hold and abeam the 'Golf' taxiway) should be restricted to use by code C (or smaller) aircraft only.
 - iii. The aircraft should enter the runway via taxiway Golf (See Appendix 2).
 - iv. A runway inspection should be undertaken after departure of the 'above code F' aircraft and prior to any further landings or take-off's.
- h. Aircraft Take-Off Runway 27 Departures.
- i. In order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft 'only', whilst the above code F aircraft is on the 'Alpha' taxiway.
 - ii. In order to maintain correct safety separation, whilst the above code F aircraft is on the 'Alpha' taxiway the Bravo Taxiway on the West Apron, (between the 'Bravo' hold and abeam the 'Golf' taxiway) should be restricted to use by code C (or smaller) aircraft only.
 - iii. The aircraft should enter the runway via taxiway 'Golf' or 'Hotel' and back-track, and vacate via taxiway 'Whiskey'.
 - iv. A runway inspection will be required after this manoeuvre.
 - v. To allow correct aircraft/obstacle separation, upon vacating the runway via taxiway 'Whiskey', the following should be instigated:
 - The perimeter track road should be closed and cleared of traffic between the East Apron intersection and a point abeam the end of the runway.
 - An aircraft guidance marshall should be positioned on the Alpha taxiway adjacent to and south of, the "Alpha 2" stop-bar.
 - vi. The aircraft will, subject to the meeting of the requirements shown in 4.8.2, traverse along the Alpha taxiway and at holding point 'Alpha 1' obtain ATC approval to re-enter the runway (See Appendix 2).

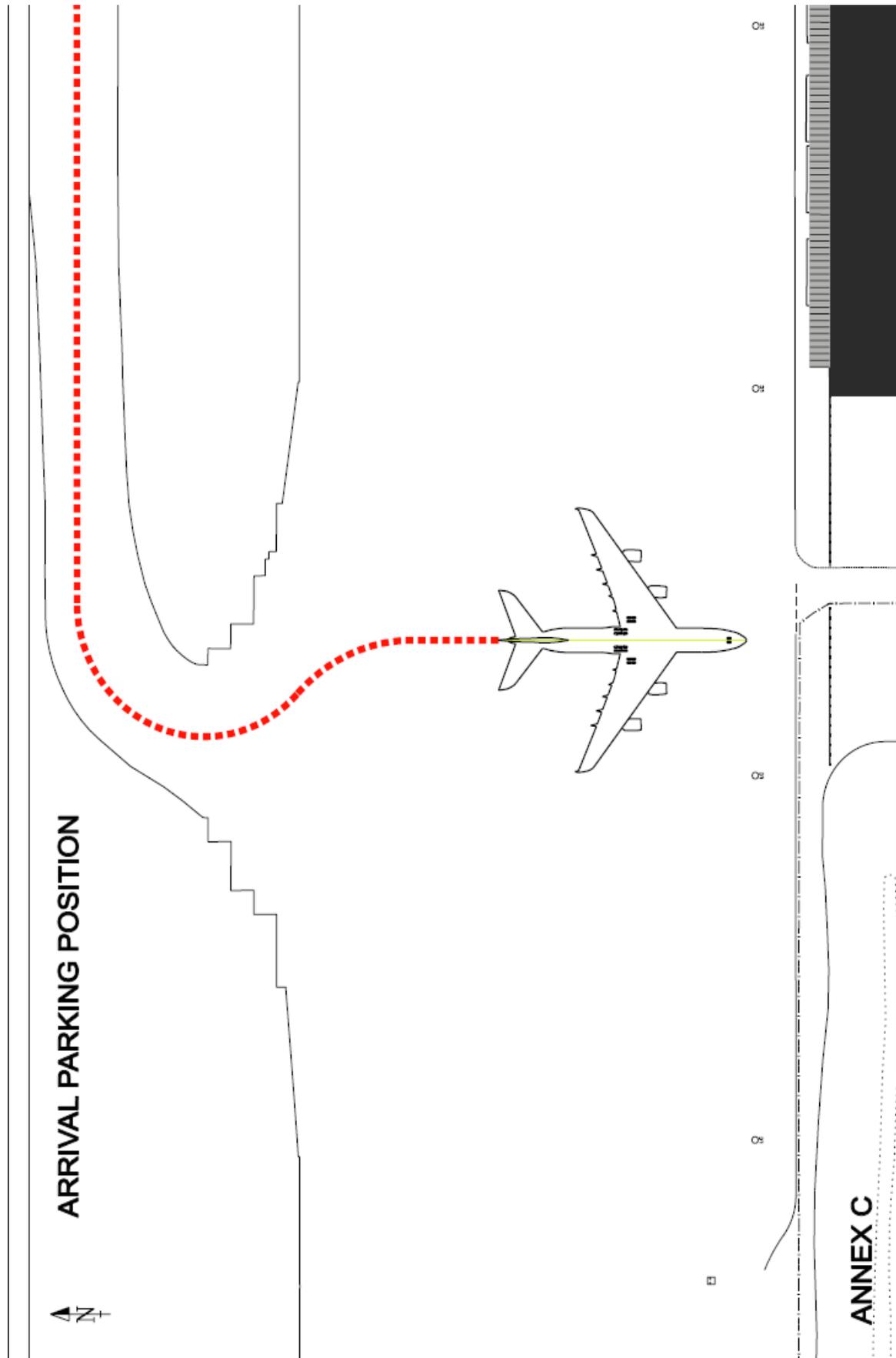
- vii. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway should be restricted to use by code D (or smaller) aircraft only.
- viii. A runway inspection should be undertaken after departure of the 'above code F' aircraft and prior to any further landings or take-off's.

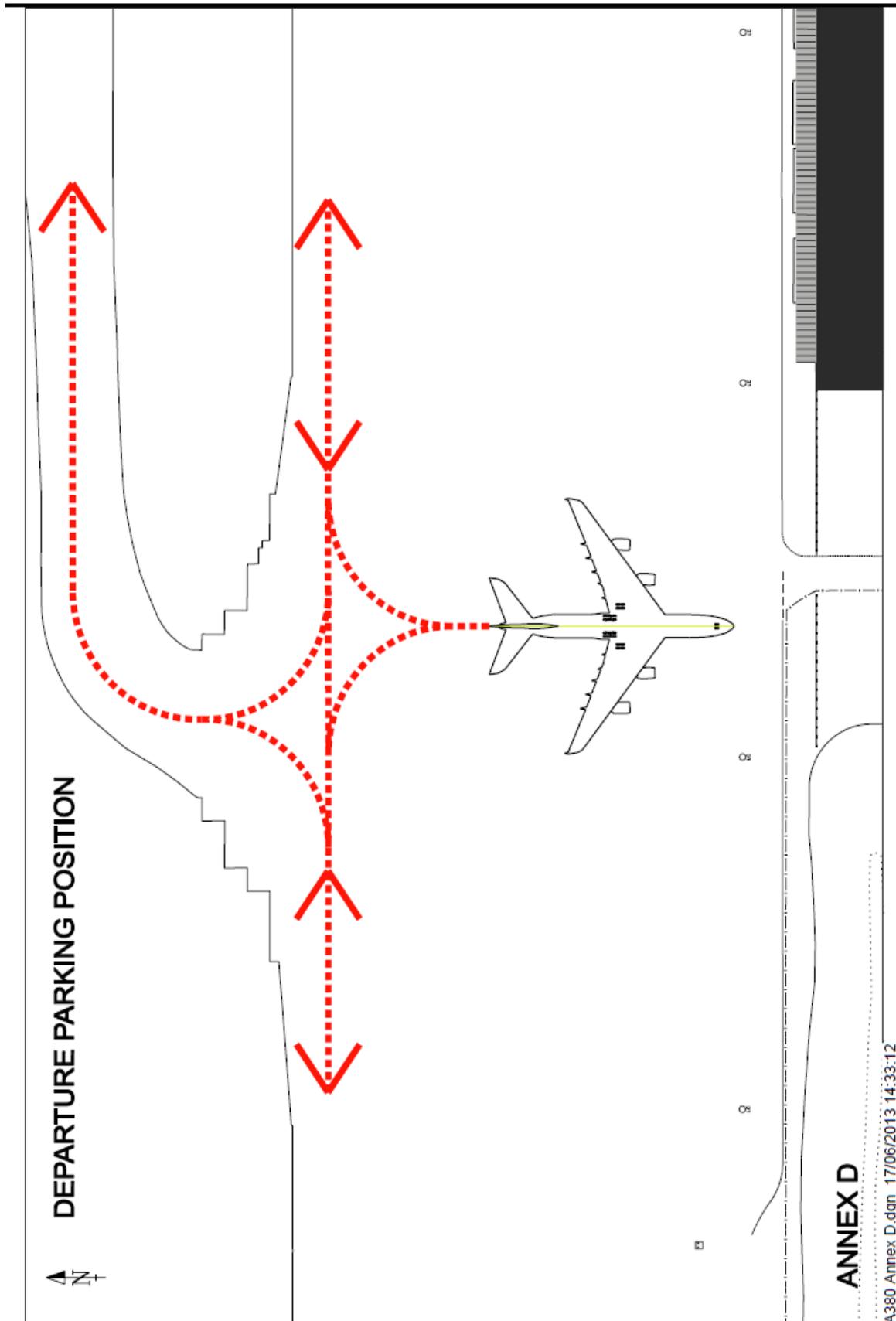
3.4 Safety communications.

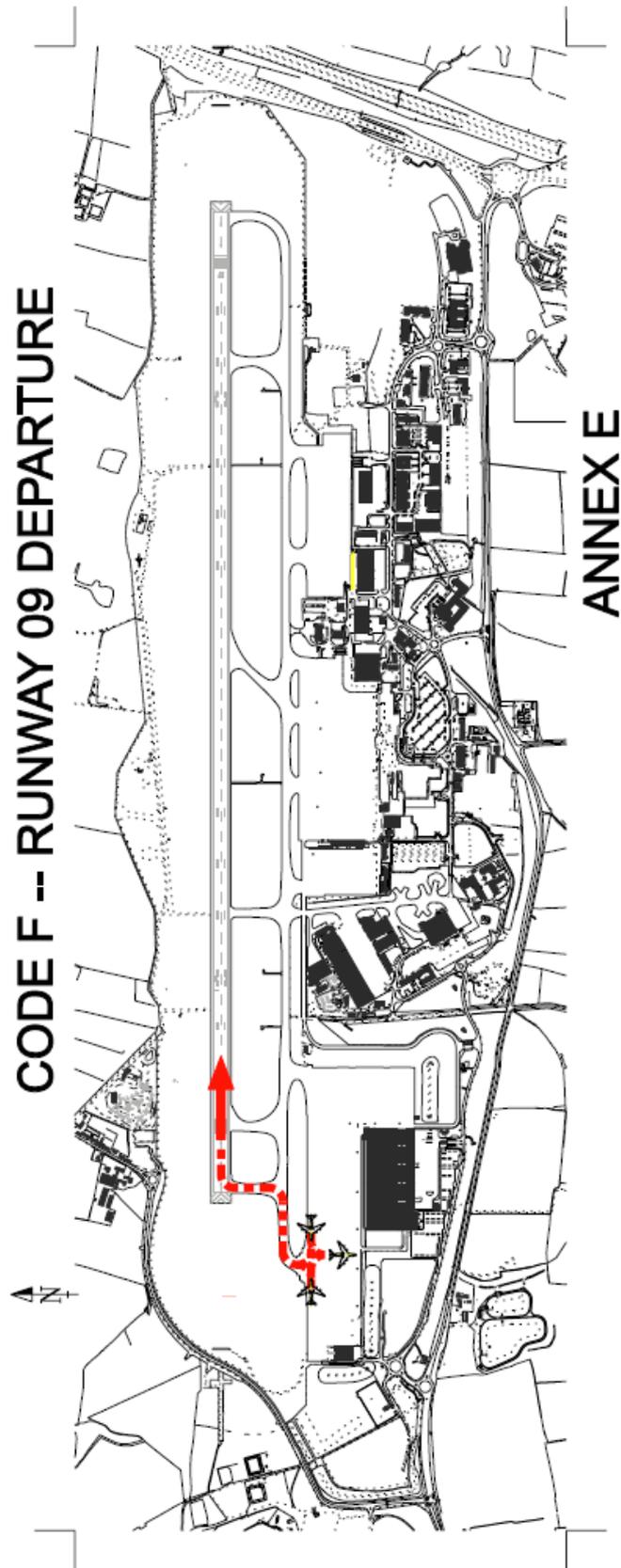
During the ground movement procedure of above code F aircraft, communications between ATC (GMC) and Airfield Operations are to be maintained and required procedures followed at all times.



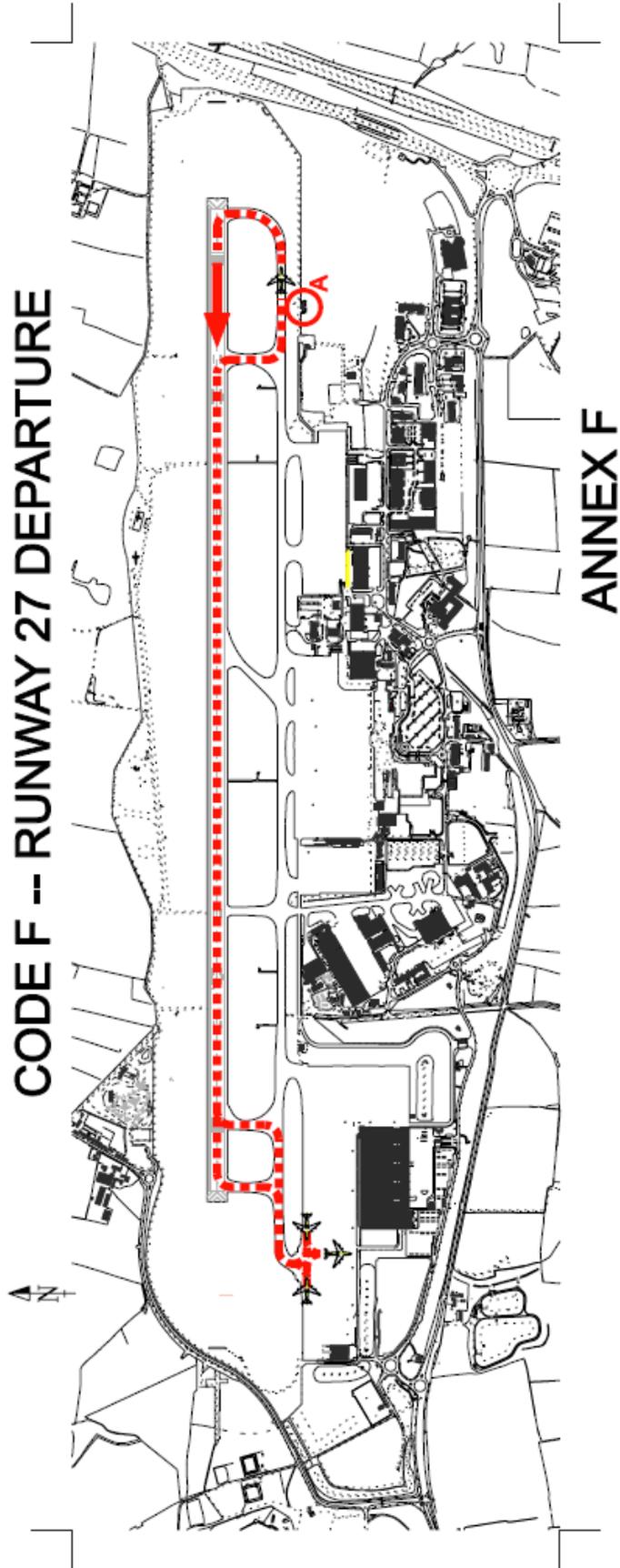
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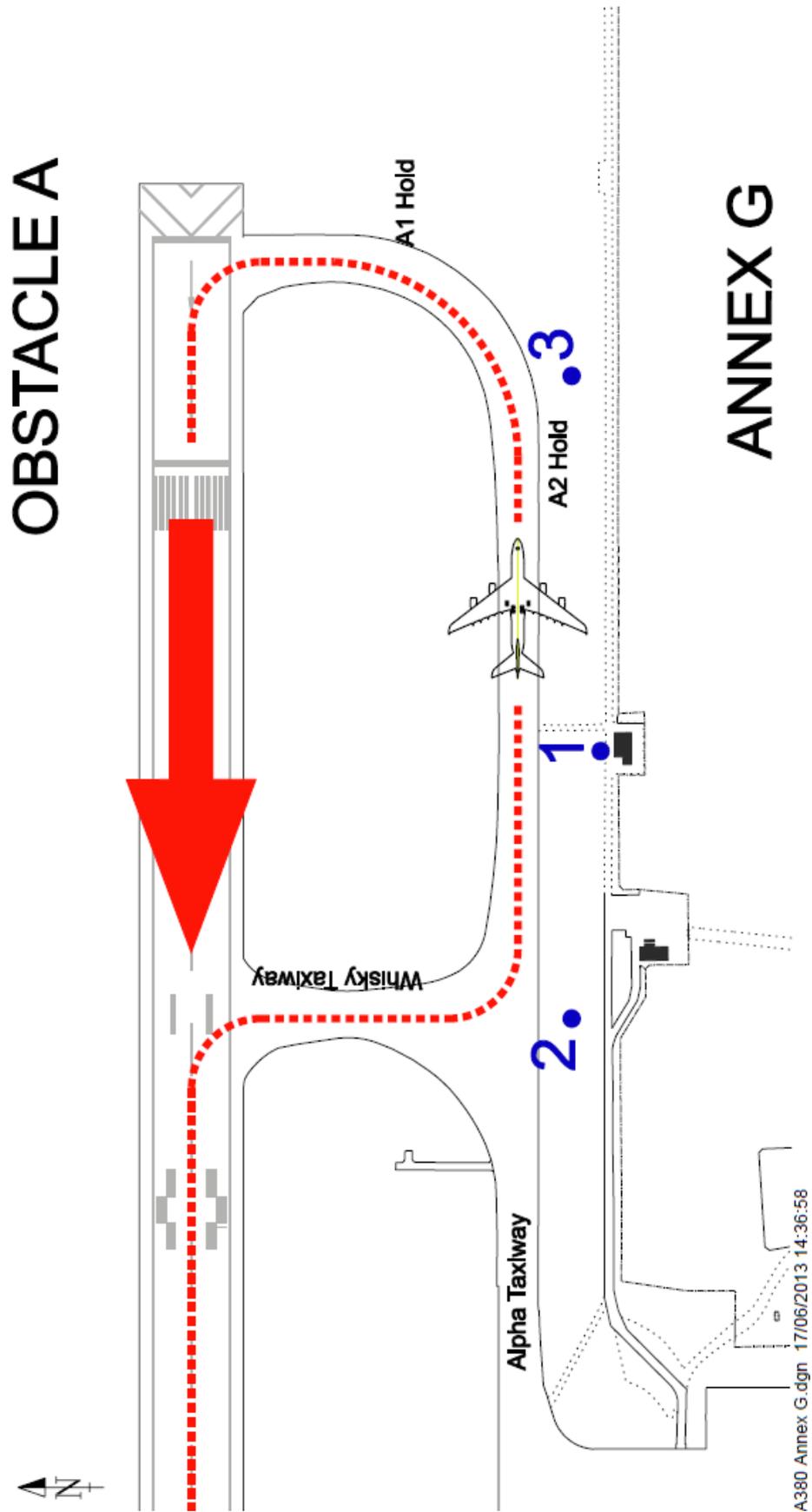




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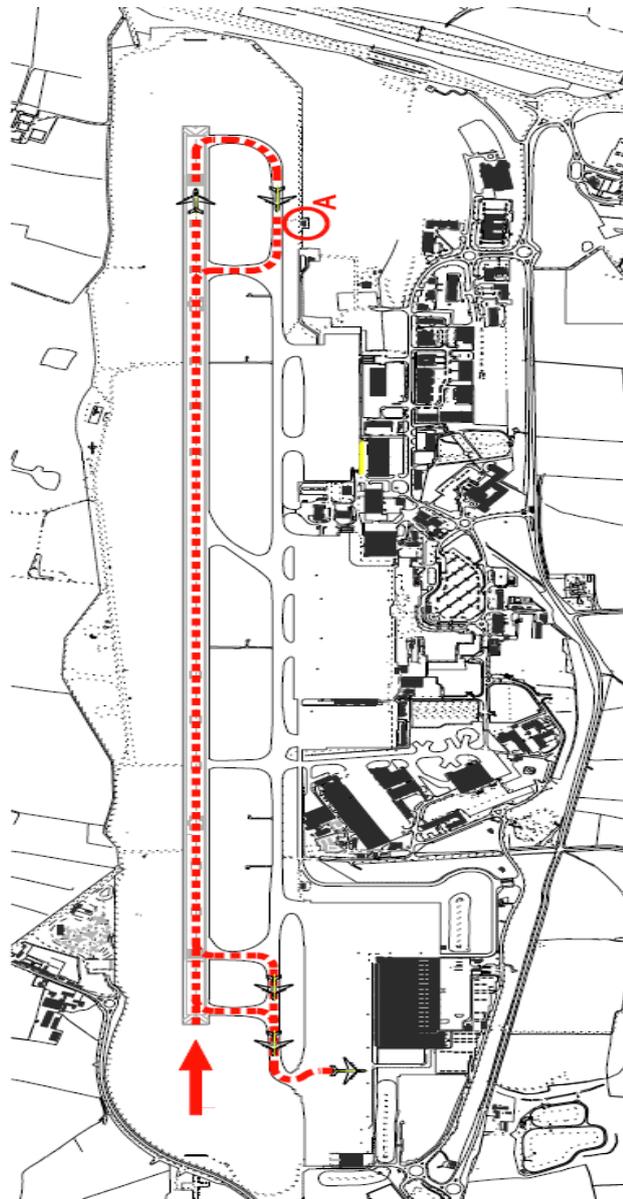


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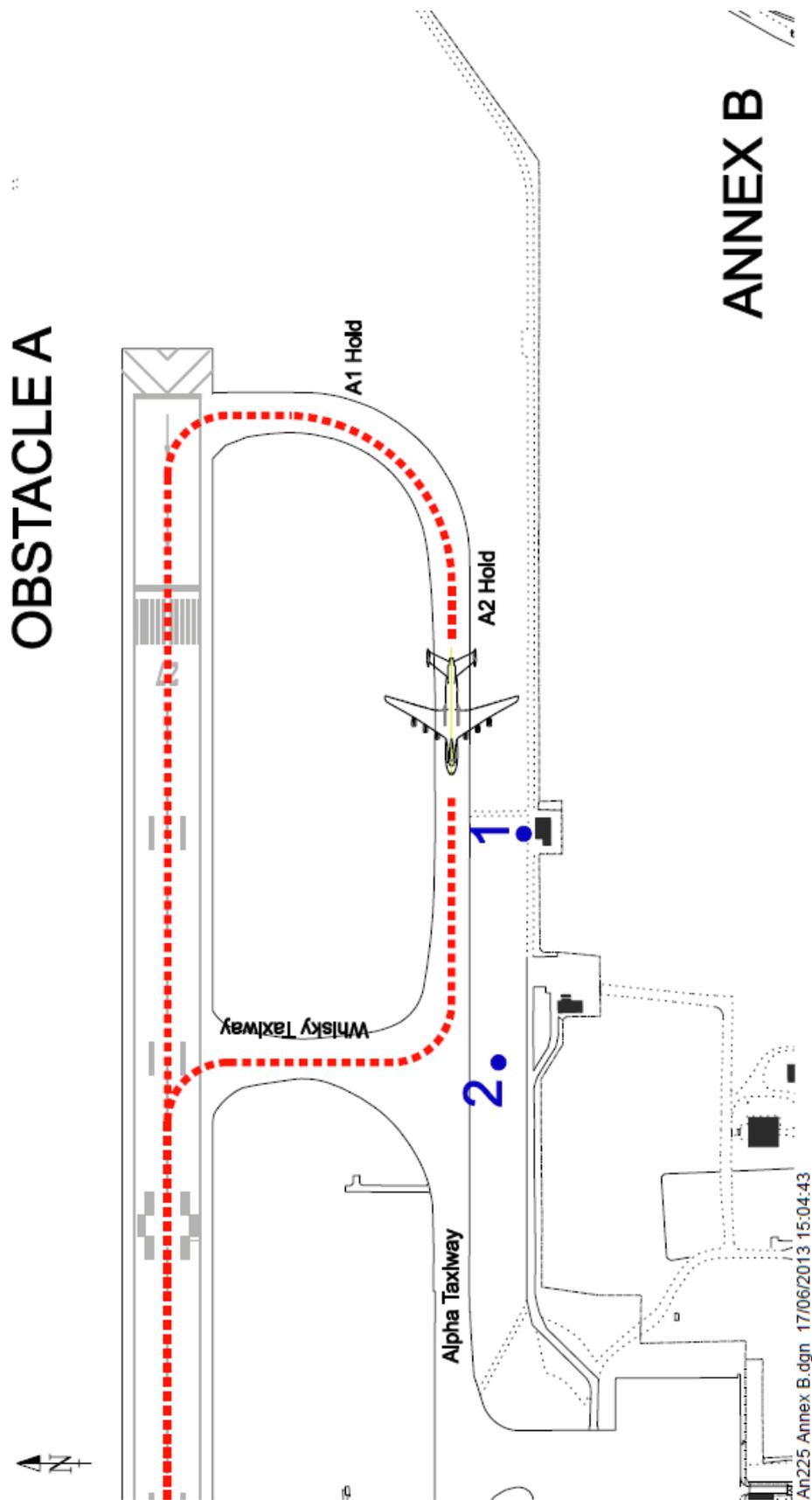
Appendix 2 - Ground Movement of Above Code F Aircraft Plans

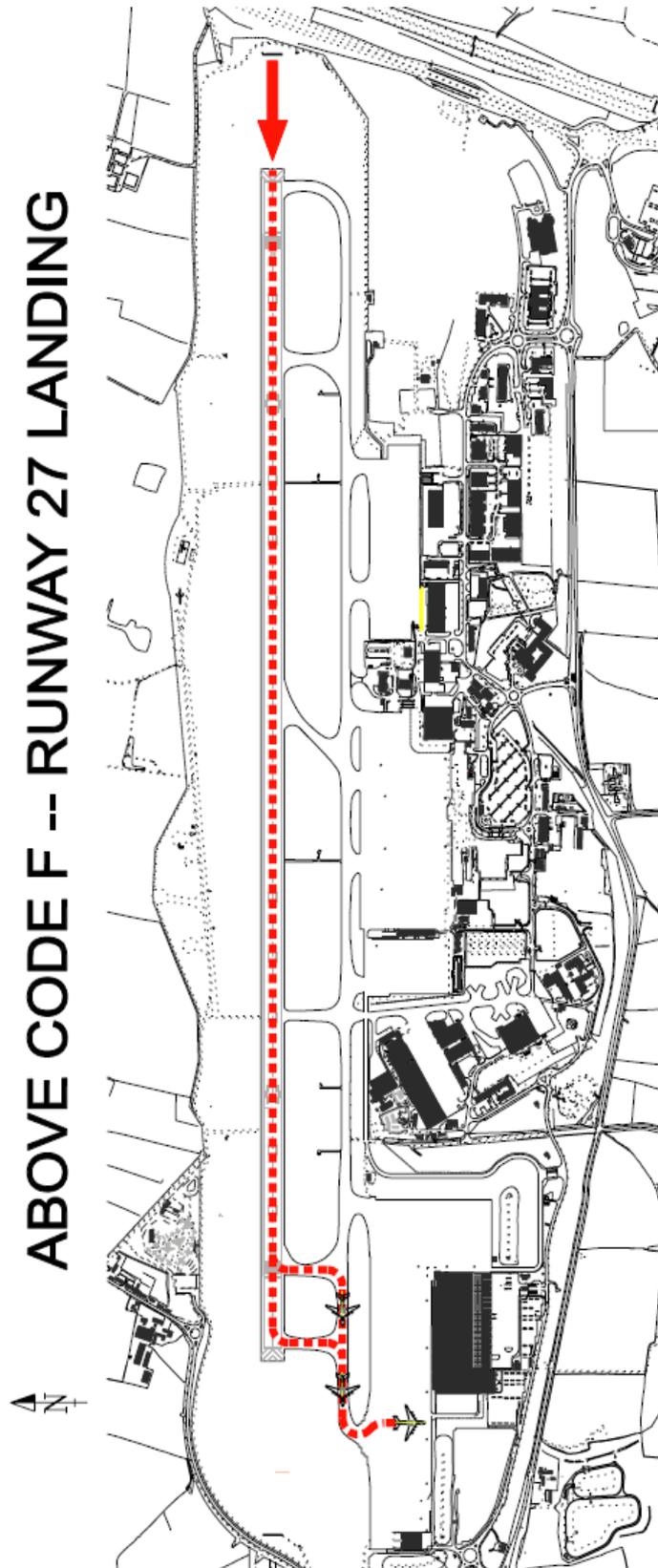
ABOVE CODE F -- RUNWAY 09 LANDING



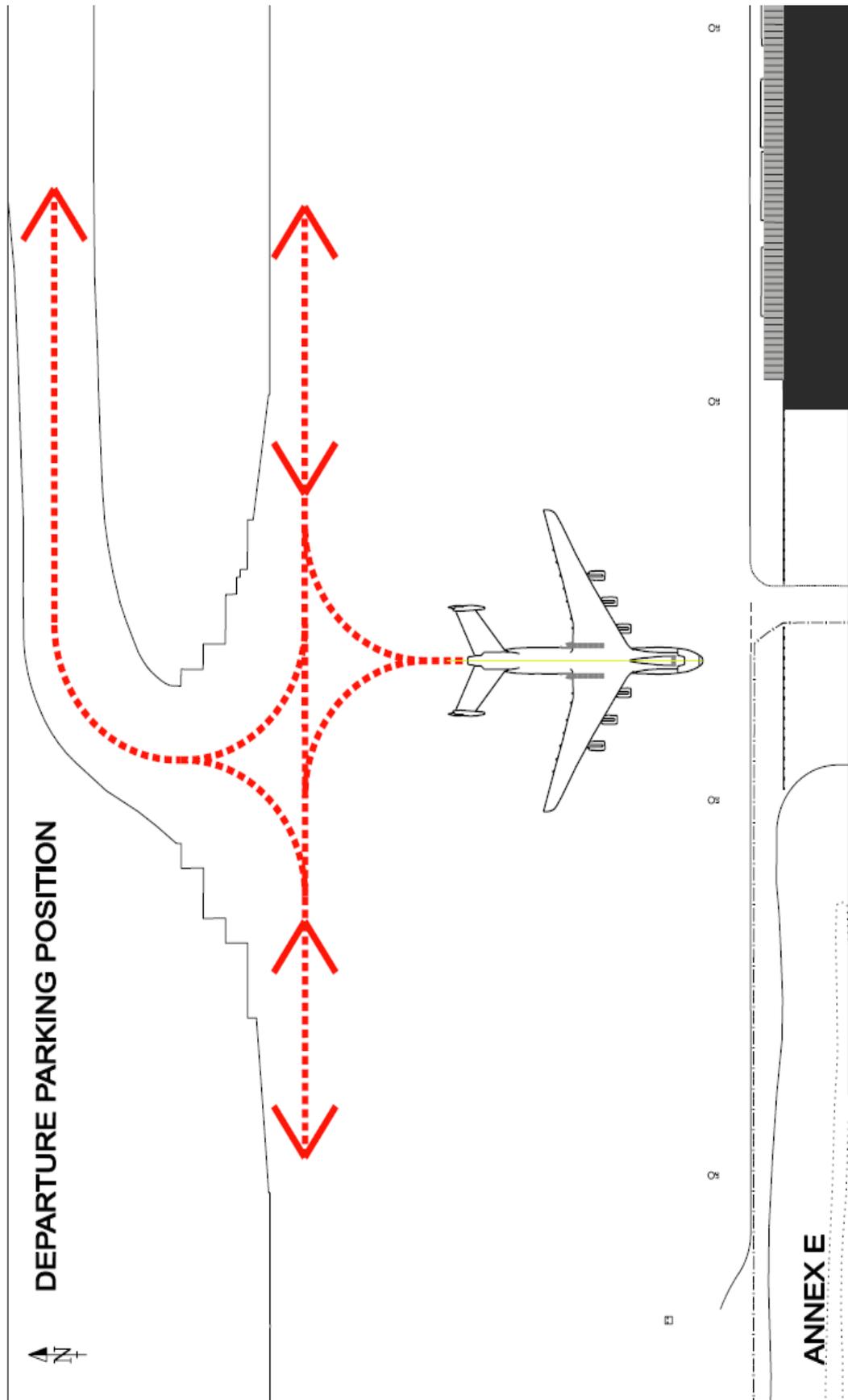
ANNEX A

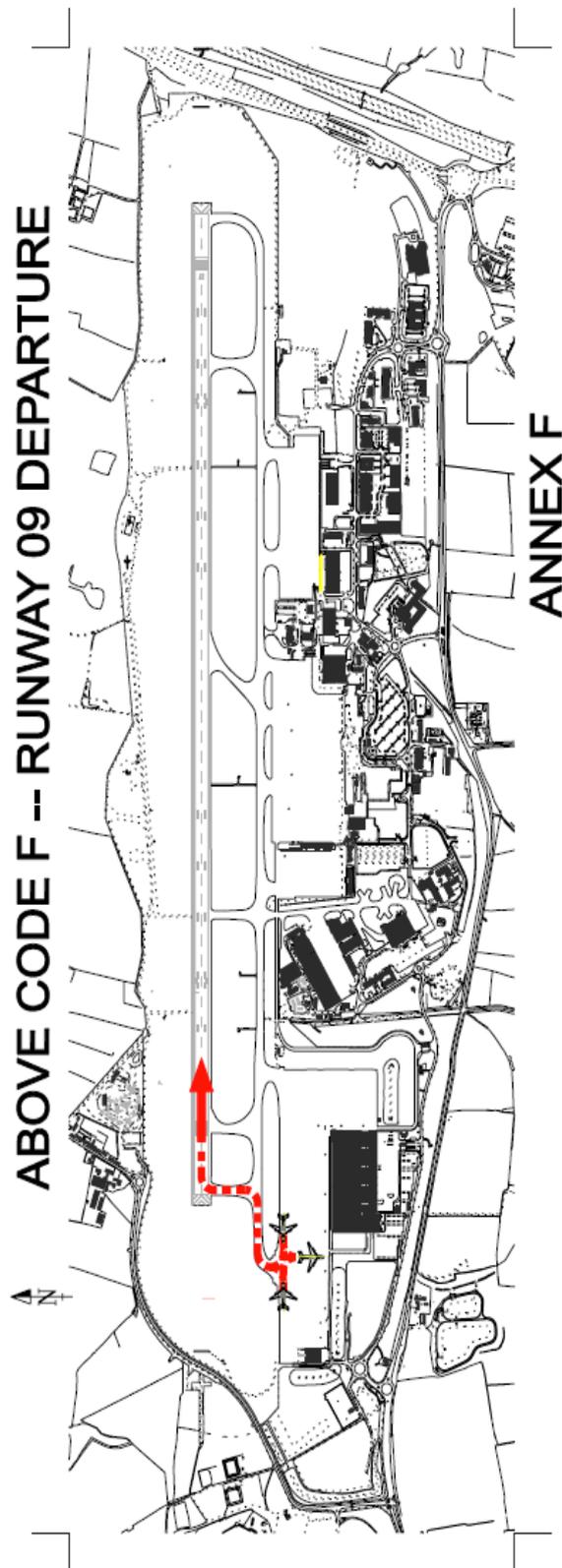
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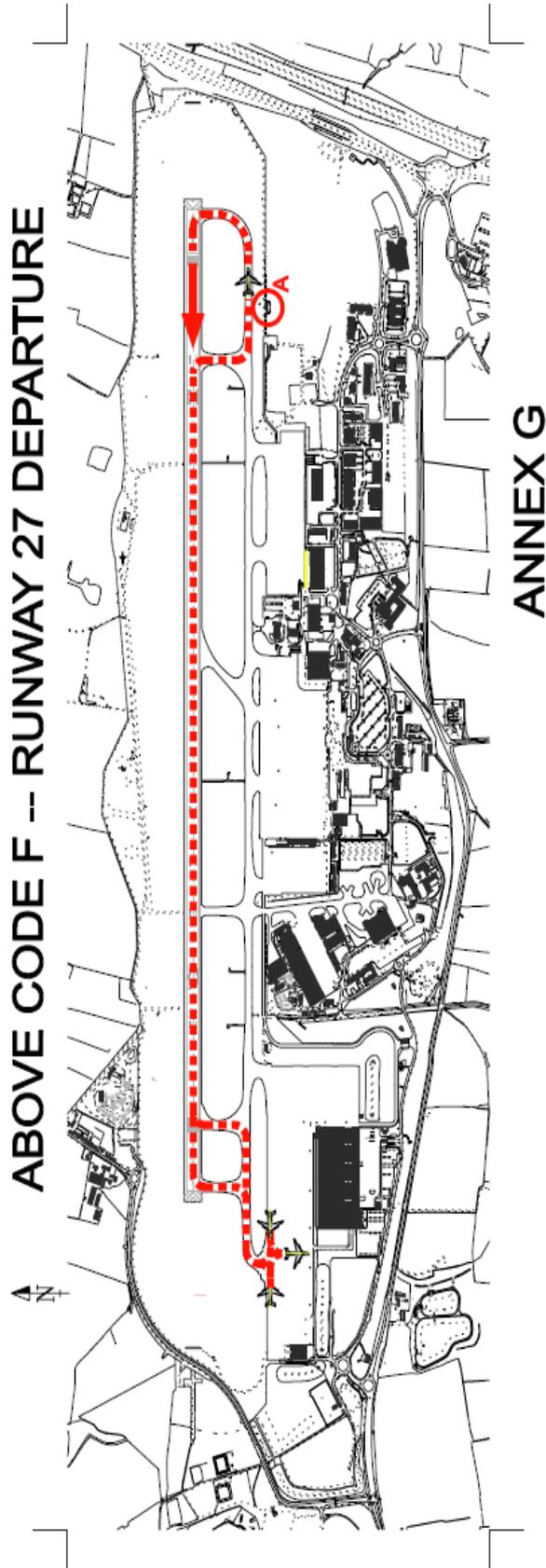


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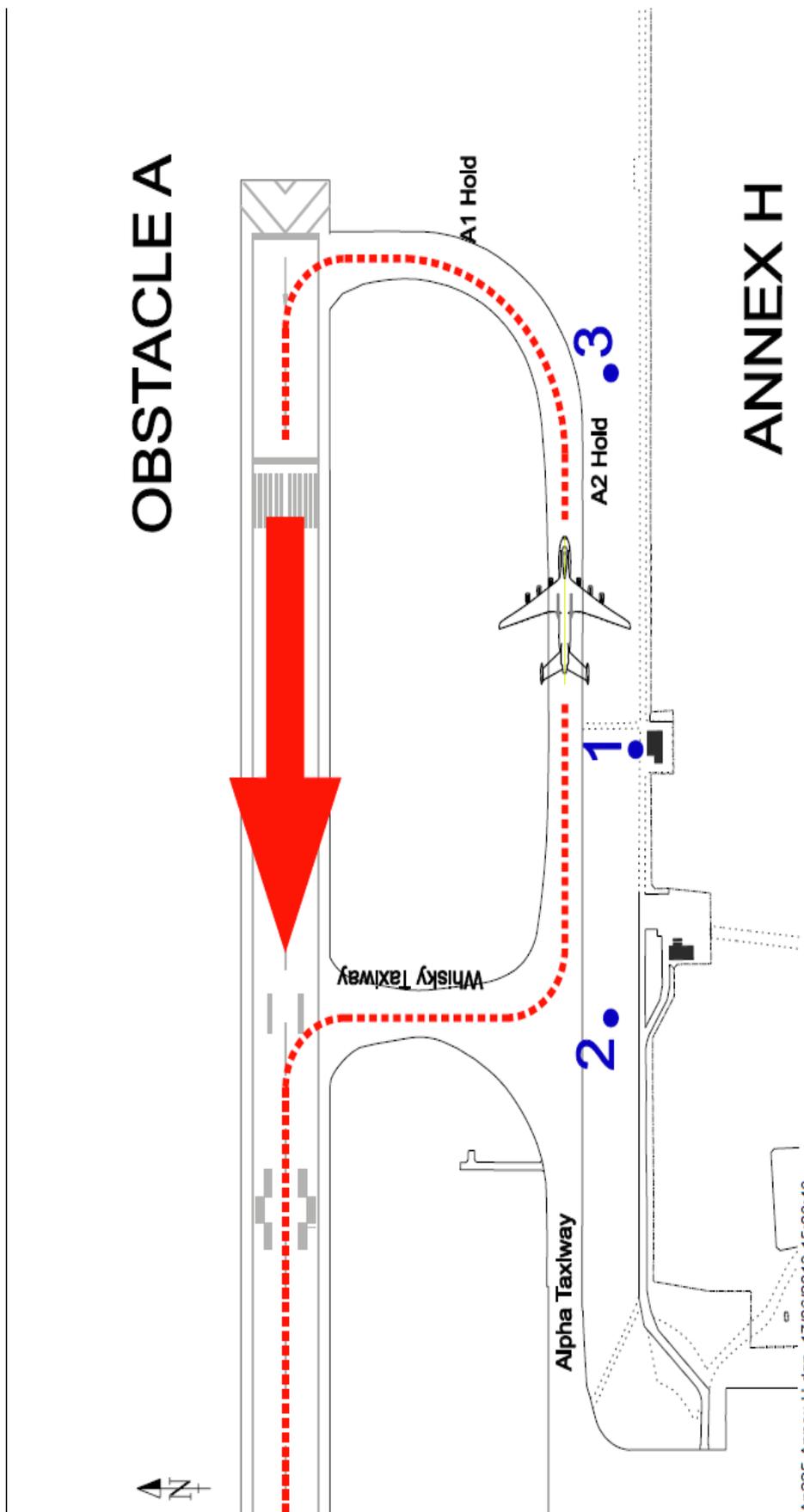




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