

Ground Movement Handling of Airbus A380 and Antonov AN225 Aircraft & Code F Aircraft Movements

Airside Operational Instruction 06

Content:

- Airbus A380 & Antonov AN225 Aircraft (Part 1)
- Code F (Part 2)

Document Owner – Airfield Operations



GROUND MOVEMENT HANDLING OF A380 / AN225 AIRCRAFT & CODE F AIRCRAFT MOVEMENTS

1 GROUND MOVEMENT HANDLING OF A380 & AN225 AIRCRAFT_(Part 1)

1. A380 / AN225 Movements (Part 1)

1.1 Introduction

- a. ICAO Annex 14 – Volume 1 (Aerodrome Design and Operations) and UK Reg (EU) No. 139/2014 CS-ADR-DSN (UK Certification Specification & Guidance material for Aerodrome Design) 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 is currently code F, which relates to those aircraft with a wingspan from 65 metres up to but not including 80 metres.
- c. Aircraft with dimensions greater than Code F i.e. Antonov 225 (88m), are not currently classified.

1.2 Objectives

- a. This document is produced to ensure that, at all times, the ground movement handling, of all aircraft specified within this document, is carried out in accordance with Operational Safety Management Assessments documented (in Safety Assurance Documents 016 & 063) and approved by the CAA (SARG).
- b. EMA ensures that, during ground movements, required safety margins are maintained for both aircraft to aircraft and aircraft to obstacles.
- c. EMA ensures that aircraft parking arrangements are carried out with due regard to safe distances maintained between all aircraft specified within this document and obstacles, as detailed in 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 A380 or AN225, on either runway 09 or 27, are as follows:

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- 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 A380 or AN225 aircraft are taxiing are as follows:

- i. The aircraft should vacate the runway via taxiway 'Alpha' and re-enter the runway via taxiway 'Whiskey', backtracking on the runway to vacate at taxiway Golf. (See Appendix A).
 - 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 marshalling Position 1 and Position 2 (See Appendix C)
 - Position 2 (see Appendix C) marshal will use signals, as trained, to marshal the aircraft from A1, and walk along the perimeter track giving "wingtip clear" of obstructions signal.
 - When good visibility with position 1 marshal is established, position 1 marshal will receive the marshalling from position 2 marshal and continue to marshal the aircraft past obstructions and turn the aircraft into taxiway Whiskey for entry to the runway.
 - iii. Whilst the aircraft is on the Alpha taxiway, in order to maintain correct safety separation, the runway is be restricted to use by Code D, or below, 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 Safety and Compliance Officer (ASCO) should then carry out an inspection of the taxiway used.
 - v. When visibility is LVP3 or lower A380/AN225 movements will not be accepted
- c. Aircraft Arrival (Runway 27 Landing)

Procedures to be carried out whilst A380 or AN225 aircraft are taxiing are as follows:

- i. Whilst the aircraft is on the 'Alpha' taxiway, in order to maintain correct safety separation, the runway is be restricted to use by Code D, or below, aircraft only.
- ii. The aircraft should vacate the runway via taxiway Golf, joining the Alpha taxiway and should then enter the West Apron through the 'Foxtrot' bell-mouth. (See Appendix B).
- iii. Whilst the aircraft is on the 'Alpha' taxiway and, in order to maintain correct safety separation, the 'Bravo' Taxiway on the West Apron is 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 ASCO should then carry out an inspection of the taxiway used.

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- v. When visibility is LVP3 or lower A380/AN225 movements will not be accepted
- d. In Low Visibility, above LVP3, the procedures listed above, together with full Cat. 3-runway/taxiway lighting should be followed, (see Airport Operational Instruction 21)
- e. Aircraft Parking (Runway 27 and 09 Landing)

Procedures to be carried out whilst parking an aircraft of type A380 and AN225.

- i. A380 & AN225 aircraft should be parked/positioned on stand 107, as per standard parking procedures.
 - ii. Stands 106 and 108 should be vacant, stand 105 should downgrade to ATP and stand 109 should downgrade to a B757-200W or smaller aircraft.
 - iii. During this part of the procedure the aircraft will be under full marshal 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 ASCO 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 type A380 or AN225

- i. AN225 & A380 should pushback as per standard procedures, (see Appendix D & E also see Airport Operational Instruction 05),
 - ii. AN225 & A380 shall enter and exit the West Apron via Foxtrot.
 - 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 ASCO 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, are restricted to use by Code D (or smaller) aircraft only.
 - ii. The aircraft will enter the runway via taxiway Golf, (See Appendix E).
- 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.

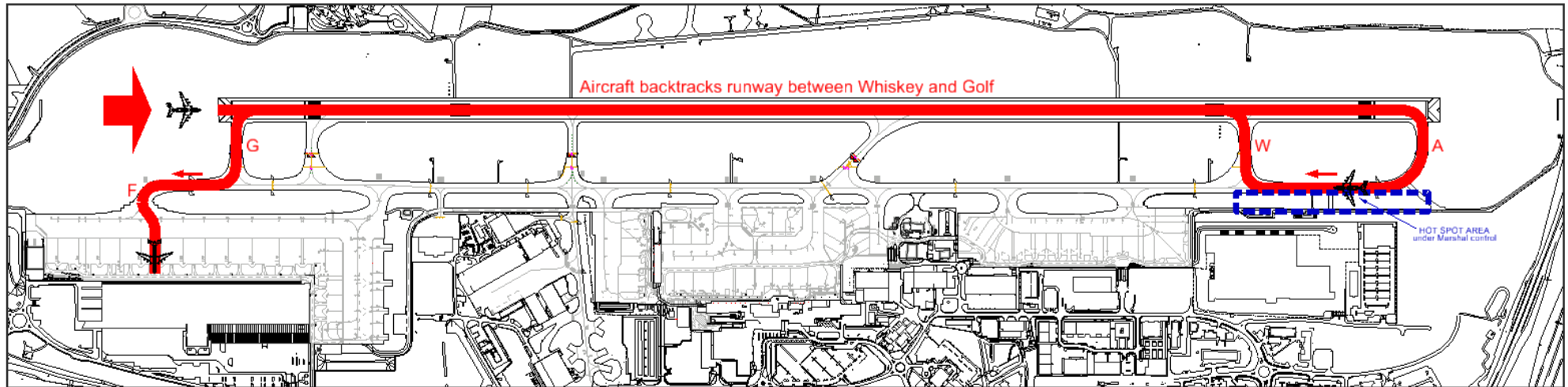
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- ii. The aircraft should enter the runway via taxiway 'Golf' and back-track the runway to vacate via taxiway 'Whiskey'.
- iii. To allow correct aircraft/obstacle separation, upon vacating the runway the following should be instigated:
 - The perimeter track road should be closed and cleared of traffic between Position 1 and Position 2 (See Appendix C)
 - The marshal at position 1 will use signals, as trained, to marshal the aircraft from Whiskey 1, and walk along the perimeter track giving the "wingtip clear of obstruction" signal.
 - When good visibility with position 2 marshal is established, position 2 marshal will receive the marshalling from position 1 marshal and continue to marshal the aircraft past obstructions and turn the aircraft towards holding point A1.
- 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 D).
- vi. 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

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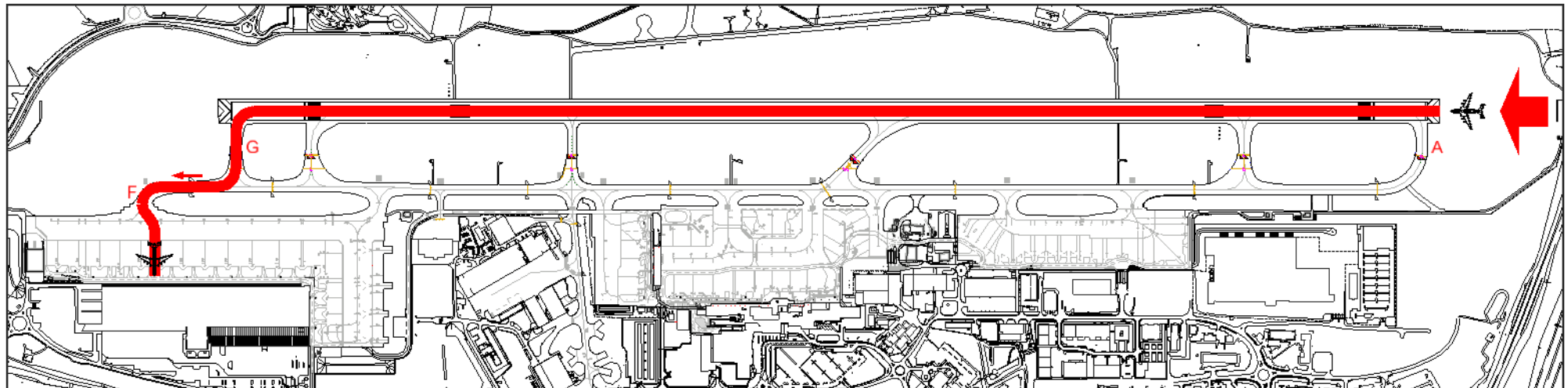
APPENDIX A

Runway 09 Arrival



APPENDIX B

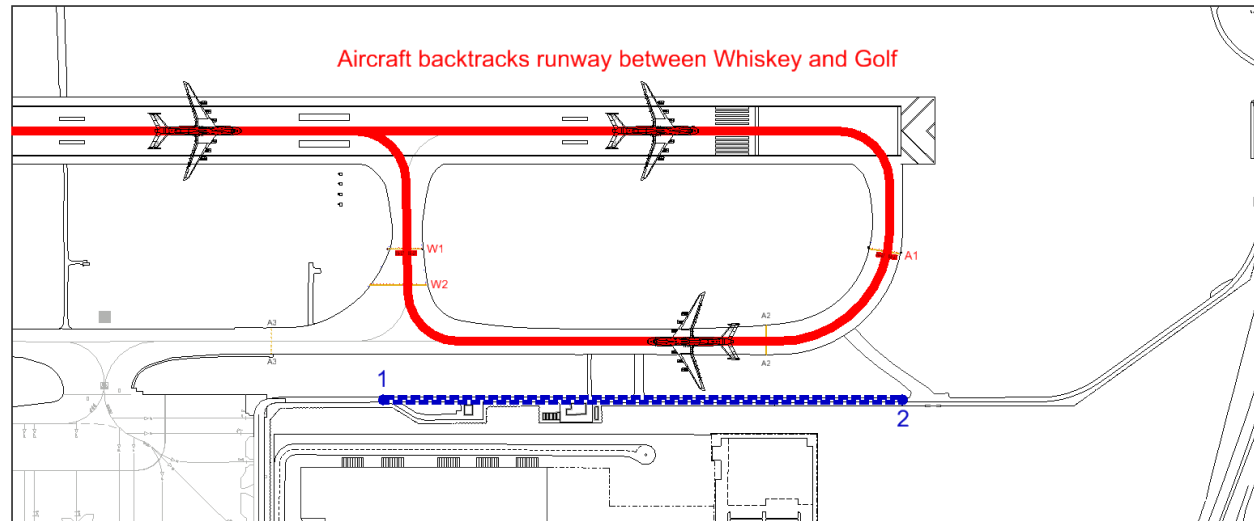
Runway 27 Arrival



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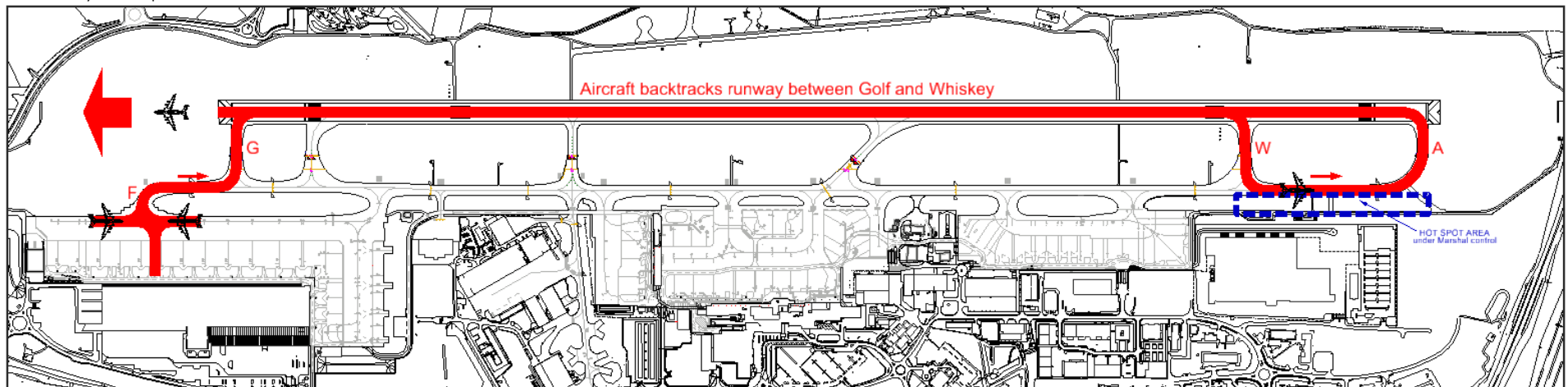
APPENDIX C

HOT SPOT area detail



APPENDIX D

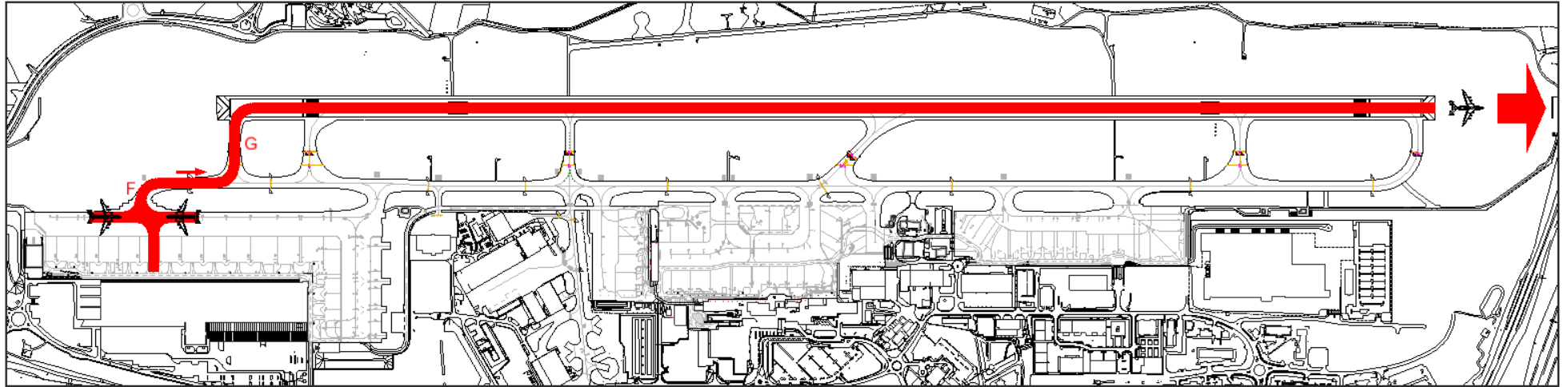
Runway 27 Departure



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APPENDIX E

Runway 09 Departure



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2. Code F Movements (Part 2)

2.1 Introduction

- a. This document relates only to Code F aircraft and the movement of these aircraft types on the runway and the Alpha Taxiway.

2.2 Ground Movement Assessment – System Description.

- a. The full safety assurance for this operation including all risk assessments is contained within Safety Assurance Document 063. This document assesses the operational function for the Aircraft Landing, Aircraft Arrival, Aircraft Parking, Aircraft Departure and Aircraft Take-Off.
- b. Whilst the aircraft described within 2.1 are manoeuvring the following restrictions apply:

OPERATIONAL RESTRICTIONS		
Movement	Obstacle	Restriction
Code F aircraft of specified type taxiing on runway 09/27	Aircraft movement on Taxiway Alpha	Taxiway Alpha restricted to code E aircraft movements
Code F aircraft of specified type taxiing on Taxiway Alpha	Aircraft holding at runway entry points Golf, Hotel, Mike, Sierra, Whiskey	No aircraft to be holding at runway entry points Golf, Hotel, Mike, Sierra, Whiskey
Code F aircraft of specified type taxiing on Taxiway Alpha	Aircraft movement on runway 27/09	Runway restricted to code E aircraft movements
Code F aircraft of specified type taxiing on Taxiway Alpha	Aircraft movement on Taxiway Bravo	Taxiway Bravo restricted to Code D aircraft movements (West Apron)
Code F aircraft of specified type taxiing on Taxiway Alpha	Code C aircraft movement on stand 30 (Central Apron)	Code F aircraft of specified type to hold A5 or A6 until code C movement is complete on stand 30
Code F aircraft of specified type taxiing on Taxiway Alpha	Code C aircraft movement on stands 21 or 23 (Central Apron)	Code F aircraft of specified type to hold A5 or A6 until code C movement is complete on stands 21 or 23
Code F aircraft of specified type taxiing on Taxiway Alpha	Code D aircraft movement on stand 24 (Central Apron)	Code F aircraft of specified type to hold A5 or A6 until Code D movement is complete on stand 24
Code F aircraft of specified type taxiing on Taxiway Alpha	Aircraft movement on Taxiway Delta	Taxiway Delta restricted to Code D (excl. MD11) aircraft movements (East Apron)
Code F aircraft of specified type taxiing on Taxiway Alpha	Code C aircraft movement on stands 5 or 6 (Central Apron)	Code F aircraft of specified type to hold A4 or A6 until Code C movement is complete on stands 5 or 6
Code F aircraft of specified type taxiing on Taxiway Bravo (West Apron)	Aircraft movement on Taxiway Alpha	Taxiway Alpha restricted to Code D aircraft movements
Code F aircraft of specified type taxiing on Taxiway Delta (East Apron)	Aircraft movement on Taxiway Alpha	Taxiway Alpha restricted to Code D (excl. MD11) aircraft movements
Code F aircraft of specified type	Main gear clearance to pavement edge less than 4m	Runway<->Alpha link taxiways Mike and Sierra cannot be used
Code F aircraft of specified type	Main gear clearance to pavement edge less than 4m	Apron entrance/exits Kilo, Mike, November, Quebec, Romeo, Tango and Uniform cannot be used
Code F aircraft of specified type	Stand clearances	Only stands 83W, 98, 107, 109 and 111 to be used

The taxiway centreline lights are to be illuminated at all times whilst these aircraft are manoeuvring.

c. The above functions are the responsibility of Air Traffic Control (Tower/Ground Movement Control) and Airfield Operations.

d. Airfield Operations will carry out the following safety functions detailed within this assessment:

- Aircraft stand allocation.
- Marshalls, if required.
- Bird Control duties.
- Lead Car duties, if requested.

e. Whilst Code F movements are taking place no upstanding obstacles will be within the UK Reg (EU) No. 139/2014 Code E taxiway strip (43.5m). This strip is further extended to 47.7m for Code F movements and is designated by double white lines, where appropriate, for the full length of the Alpha taxiway on adjacent manoeuvring areas.

f. All Code F movements shall only use runway entrance/exits Alpha and Golf (except when backtracking required). This is to avoid any infringements to the Alpha taxiway when these aircraft are at the CAT I/II/III runway holding points

2.3 Aircraft Taxiing charts

The below illustrations show the narrowest and the widest aircraft type that will use the Alpha Taxiway above Code operations within this document.

