Ground Operations

Operational Safety Instruction

Aircraft Aprons, Stands, Types & Markings

03rd January 2020

ASGrOps_OSI_030

v2.0

It is the responsibility of all employers to ensure that relevant OSIs are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

1. Introduction

1.1 There are a large number of different aircraft types and variants which use Heathrow. In order to meet the parking demand, aircraft apron & stand layouts are designed in accordance with the type(s) of aircraft for which the stand is intended to be used, and in some cases to offer some flexibility within that design.

1.2 This instruction details the types of stands in use at Heathrow and the markings associated with each type of stand.

1.3 This instruction supersedes and replaces ASGrOps_OSI_030 v1.0.

2. Definitions

Abbreviation	Description
Aircraft Stand	**A designated area intended to be used for parking aircraft. An aircraft stand has a specific number.**
Apron	**A defined area provided for the stationing of aircraft for embarkation or disembarkation of passengers, the loading and unloading of cargo, fuelling and for parking.** **It can also be used as a collective term for a number of aircraft stands.**
MARS Stand	**Multiple Aircraft Ramp System Stand**
MCA Stand	**Multi Choice Apron Stand**

3. Safety Procedure

3.1 Stand Types

3.1.1 Heathrow operates a variety of stand types and configurations. These are defined as;

3.1.1.1 Standard Stand (see 3.3).
3.1.1.2 Multiple Aircraft Ramp System Stand (see 3.4).
3.1.1.3 Multi Choice Apron Stand (see 3.5).

3.2 Stand Markings

3.2.1 Stand markings that are intended to provide guidance for the aircraft pilots/tow crews are yellow in colour. Stand markings intended to provide guidance for vehicle operations are primarily white in colour, although other colours may be used for a specific purpose.

3.2.2 The stand is defined by; a single white line at the head of the stand, usually separating it from the airside road. The sides are similarly marked. The back of stand is marked by a double white line that defines the boundary between the stand and manoeuvring area.

3.2.3 At the rear of some stands there are broken white lines running parallel to the double white lines, this is to designate a back of stand route for slow moving equipment or wide freight dollies (see Appendix D).

3.2.4 Stand centrelines may consist of a single yellow line or a combination including yellow/white centrelines. Each centreline will have its own designation (differences in these markings/designations will be explained within this OSI).

3.2.5 The head of stand area will usually have an area marked out for equipment parking. This area is normally bordered with a solid red line.

3.2.6 Aircraft stands will also have numerous other optional markings, defining such areas as additional equipment parking, airbridge parking & manoeuvring area, baggage area, and so on.

3.2.7 Stands are bounded or separated by a clearway. Clearways give access for emergency services vehicles, and vehicles waiting to service an aircraft

turnaround. For instructions on operating vehicles on stand refer ASDRVE_OSI_005 Vehicles and Equipment Airside – Operations.

3.2.8 Apron and stand markings shown in Appendix D.

3.3 Standard Stand

3.3.1 The stand size will vary in accordance with the maximum size of aircraft intended to use the stand.

3.3.2 The stand will have a single yellow centreline and may have stop positions shown for the major types of aircraft that use the stand. These marks are for the use of marshallers and tow crews.

3.3.3 If the stand is served by single or multiple airbridges, each airbridge will have a parking box/circle and a 'starburst' of lines radiating from the box indicating the manoeuvring area of the airbridge. Vehicles must not park within this area.

3.3.4 Additional vehicle parking areas may be painted to the side of the aircraft parking position. These are to be used only when the aircraft engines have stopped and the aircraft has been chocked.

3.3.5 Areas for parking empty baggage dollies may be painted towards the back of the stand adjacent to the clearway.

3.3.6 A standard stand layout is shown in Appendix A.

3.4 Multiple Aircraft Ramp System Stands

3.4.1 To enable flexible use of large aircraft stands, the MARS stand configuration has been adopted on some stands. This allows for the parking of two smaller aircraft either side of the main centreline.

3.4.2 MARS stands consist of a main centreline with two subsidiary centrelines either side of the main centreline. These subsidiary centrelines are painted yellow/white and are given the designation of the stand number with 'L' (Left) and 'R' (Right) added.

3.4.3 A pair of parallel white lines will indicate the clearance zone separating the two wingtips of the respective aircraft parked on the 'Left' and 'Right' centrelines. These lines called 'MARS bars'. Vehicles and equipment are not to park/wait in these areas, but may transit the area between the lines during the turnaround process.

3.4.4 The stand may be equipped with multiple airbridges, which will reach/serve most or all of the centrelines. The stand will therefore have alternative parking boxes depending which centreline is to be served. This will particularly apply to the 'Left' centreline.

3.4.5 A MARS stand layout is shown at Appendix B.

3.5 Multi Choice Apron

3.5.1 An MCA stand is a collection of stands that have multiple centrelines that allow the area to operate a variety of different combinations of parked aircraft.

3.5.2 Because of multiple centrelines, it is not possible within the apron area to have defined 'clearways' or 'MARS bars' for all the aircraft parking combinations. Instead, a safety 'buffer' zone is painted between the centrelines serving the small aircraft combinations. The buffer zone is displayed as a white hatched box. The width of the safety zone can vary but will be positioned so that the wingtips of the smaller aircraft remain clear of the area.

3.5.3 When an MCA stand is used in larger aircraft configurations, the wing of a larger aircraft will travel over the buffer zone and will be covered when the aircraft has parked.

3.5.4 Vehicles and equipment are not to park/wait in these hatched buffer zones. The area may be transited during the turnaround when; the aircraft is parked, the area is clear of aircraft wings and there is no risk of collision.

3.5.5 The MCA stand will be equipped with multiple airbridges, which will reach/serve most or all of the centrelines. The stand will therefore have alternative parking boxes dependant which centreline is to be served.

3.5.6 A MCA stand layout is shown in Appendix C.

4. Enquiries

1.1.1 Any questions concerning this instruction should be addressed to the Heathrow Airfield Duty Manager AfDM; Telephone 020 8745 7373, Email – airfield.duty.manager@heathrow.com

Appendix A

Standard Stand

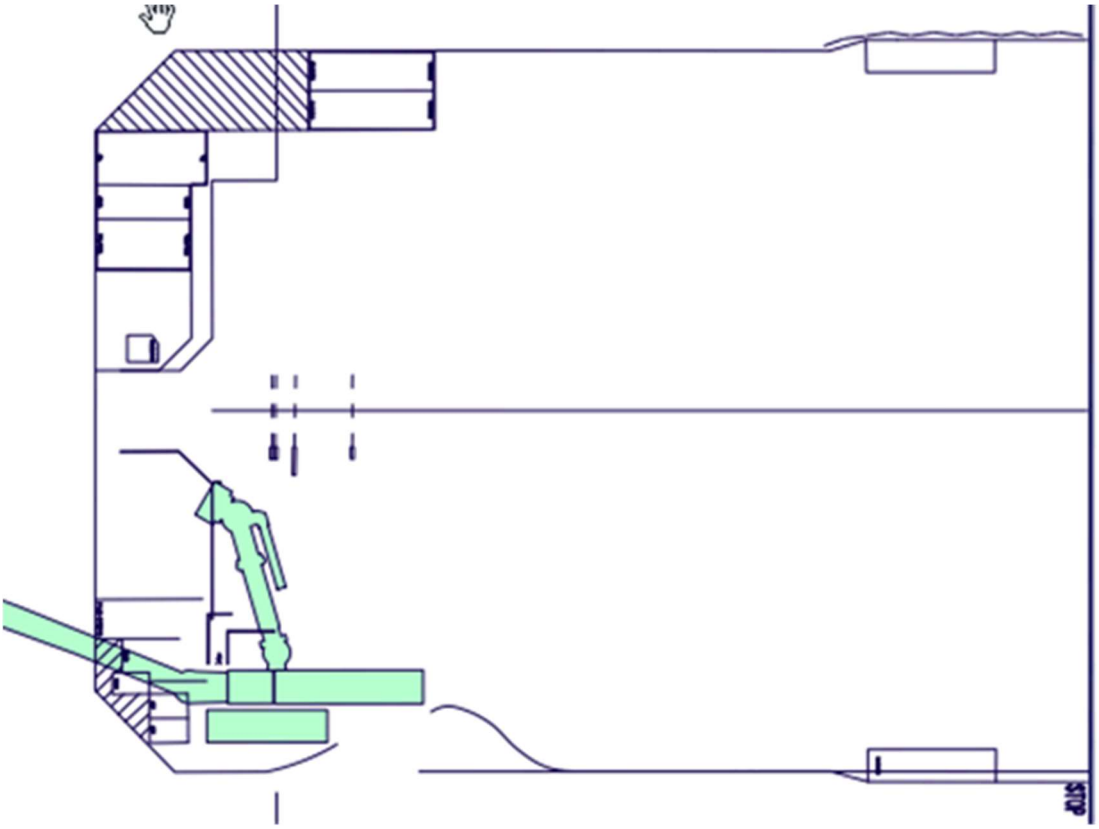

Figure 1 – Showing aircraft stop positions on the main centreline, airbridge position and various parking and equipment areas located on the stand.

Appendix B

Multiple Aircraft Ramp System Stand

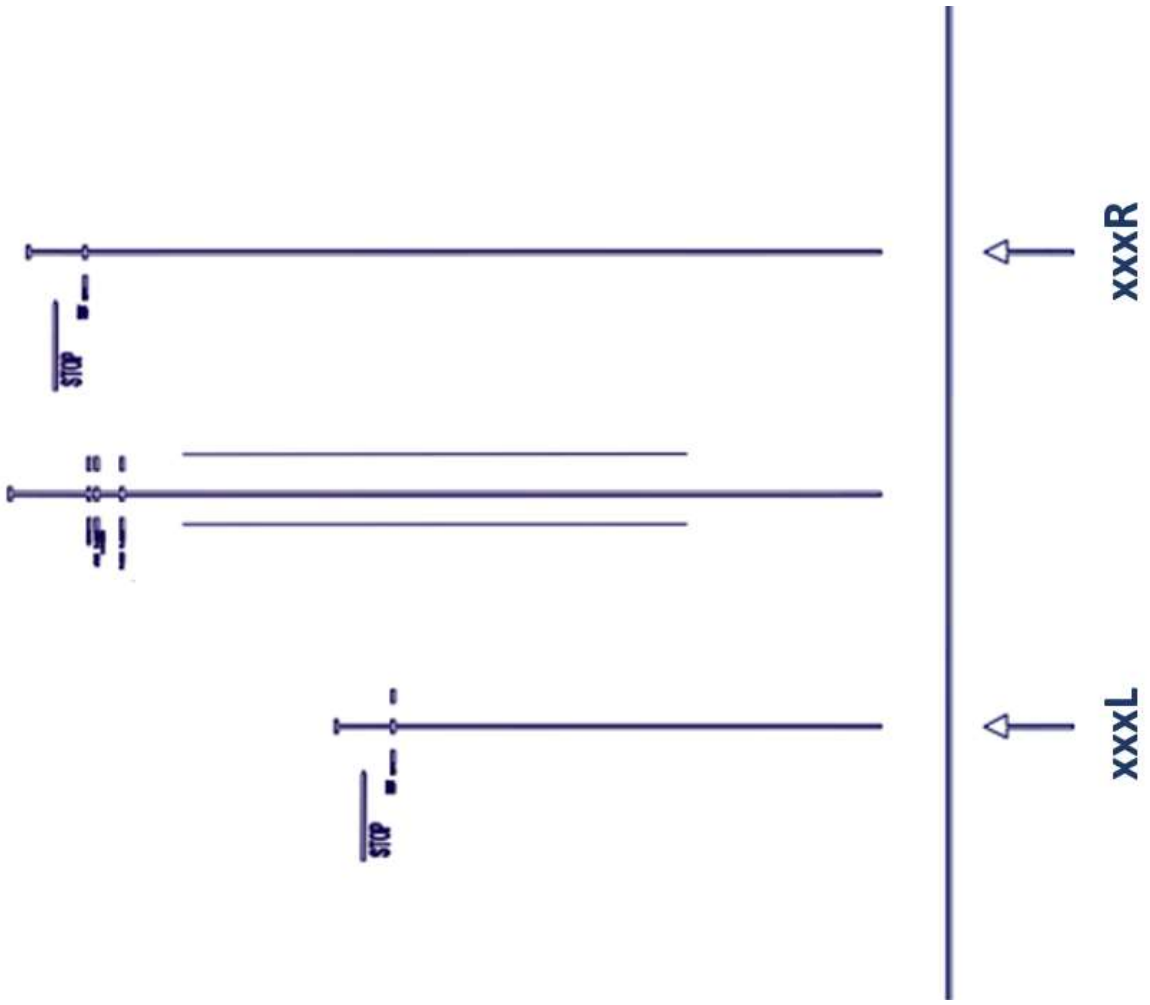

Figure 2 – Showing main centre line and the two subsidiary centrelines either side marked left and right, ‘xxx’ indicates a stand number and ‘L’ or ‘R’ defines the left or right designation. The ‘MARS’ bars can also be seen each side of the main centreline.

Appendix C

Multi Choice Apron stand Layout

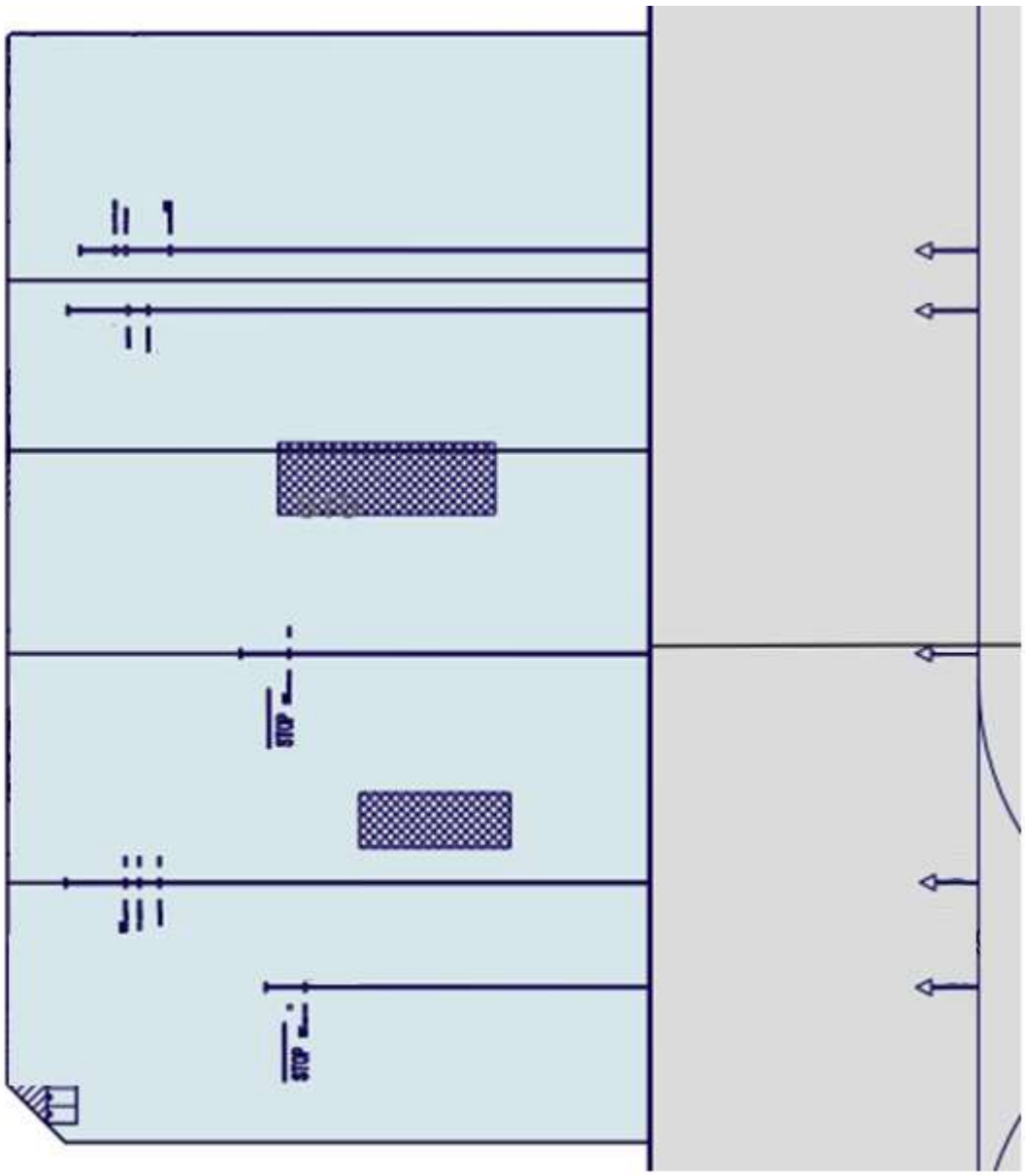

Figure 3 – Showing multiple centrelines for a variety of aircraft combinations and hatched buffers between certain aircraft parking positions. Each centreline will have its own numerical designation.

Appendix D

Apron and Stand Markings

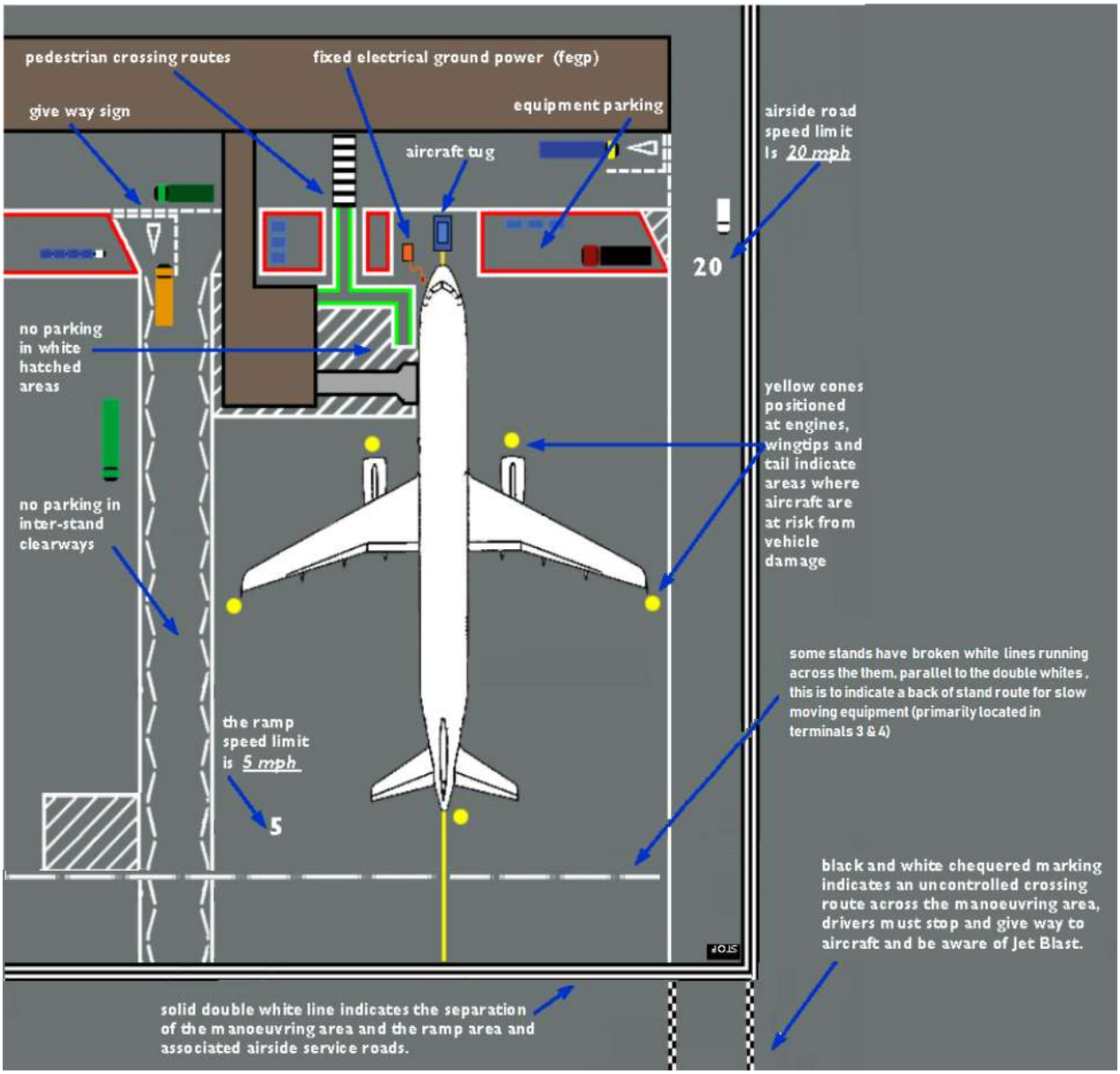

Figure 4 – Shows markings that may be found on a stand and the surrounding apron area. The figure shows a back of stand route for use by equipment associated with aircraft turnaround.