

PROJECT UNION AT BULLS BRIDGE

Aviation Report

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Prepared by



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For

ARK Estates 2 Ltd

IFP Safeguarding Assessment

Data Centre Development

London Heathrow Airport

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Introduction

Cyrrus have been requested to conduct an Instrument Flight Procedure (IFP) Safeguarding assessment on the impact of a proposed development, situated to the north of the airfield.

This safeguarding assessment has been separated into two sections, one looking at existing procedures in a 2R environment and the other reviewing the proposed new procedures in a 3R environment. As the procedures used in a 3R environment are not yet known, assumptions have been made with regards to navigation specification.

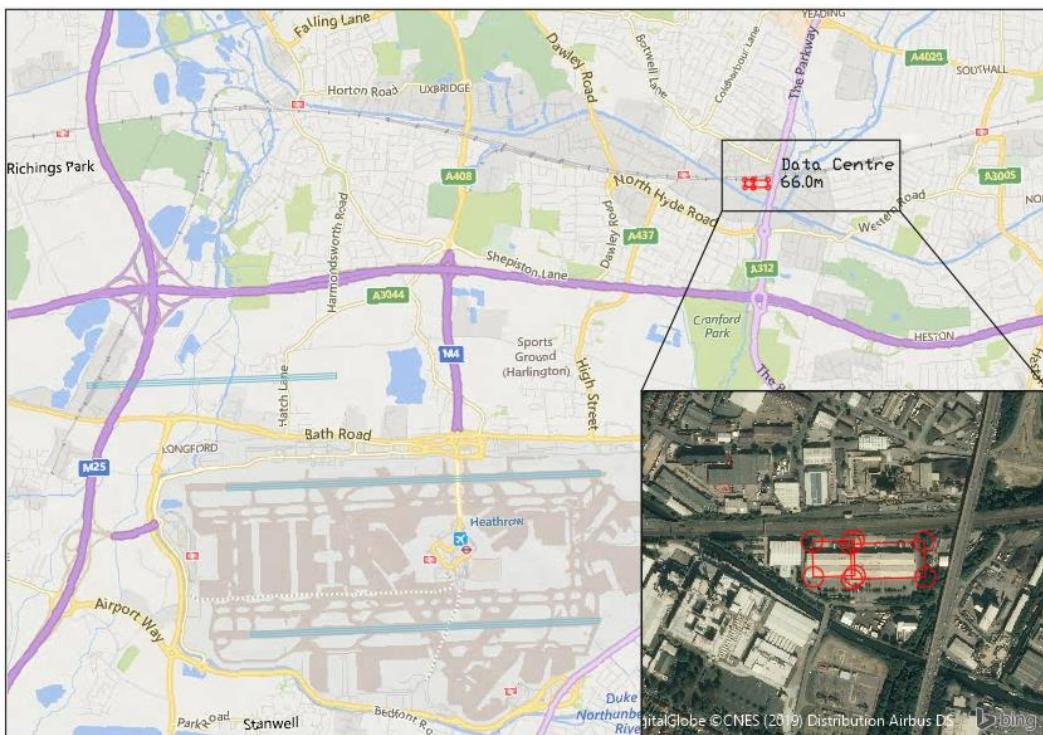


Figure 1: Proposed Development Location

List of data received from client:

- Building elevation heights and co-ordinates. This data was received in OSGB36 format and converted by Cyrrus into WGS84 (see Annex A)

List of data received from Heathrow Airport:

- Coordinates and elevations for the new runway:
 - TH 27R – 512912.70N / 0002809.45W
 - TH 27R - Elevation 26.64m
 - TH 09L – 512912.25N / 0003013.87W
 - TH 09L - Elevation 25.94m

Assumptions

The following assumptions have been made for this assessment:

- The ILS, LOC, LNAV/VNAV and VNAV approaches, as currently published in a 2R environment are replicated for the new northern Runway.
- The missed approach will be the same for the new Runway as currently published in a 2R environment. The missed Approach for 2R RWY 09L procedures will be replicated in 3R RWY 09L, straight ahead until passing 1580' for example.
- The coordinates for the new obstacle and third runway are correct.
- The approach procedures will use the same navigation specification as per todays operations plus the introduction of new RNP-AR approaches.
- The conventional departures will not be in operation in a 3R environment and replaced with new RNP1-RF departure procedures.

Assessment

The development has a maximum planned elevation of 65.5m that has been rounded up to 66m AMSL (Above Mean Sea Level) for this assessment. A 20m radius was used against each supplied point as a horizontal buffer for the purposes of obstacle analysis.

Table 1 details the results of the obstacle analysis in a 2R environment.

Assessed Procedure	Runway	Impact	Comments
ILS/DME	09L	No	Nil
LOC/DME		No	Nil
LNAV		No	Nil
LNAV/VNAV		No	Nil
RNP-AR		No	Nil
Departures		No	Nil
ILS/DME	09R	No	Nil
LOC/DME		No	Nil
LNAV		No	Nil
LNAV/VNAV		No	Nil
RNP-AR		No	Nil
Departures		No	Nil
ILS/DME	27L	No	Nil
LOC/DME		No	Nil
LNAV		No	Nil
LNAV/VNAV		No	Nil

Assessed Procedure	Runway	Impact	Comments
RNP-AR		No	Nil
Departures		No	Nil
ILS/DME		No	Nil
LOC/DME		No	Nil
LNAV		No	Nil
LNAV/VNAV		No	Nil
RNP-AR		No	Nil
Departures		No	Nil
MSA	NA	No	Nil
VISUAL CIRCLING	NA	No	Nil

Table 1: Obstacle Analysis in 2R Environment

Table 2 details new RWY designation in a 3R environment.

Current designation	New designation
09L	09C
09R	09R
-	09L
27L	27L
27R	27C
-	27R

Table 2: 3R Environment Naming Protocol

Table 3 details the results of the obstacle analysis in a 3R environment.

Assessed Procedure	Runway	Impact	Minima caused by obstacle	Comments
ILS/DME	09L	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	-	
LNAV/VNAV		No	-	
RNP-AR		No	-	
RNP1-RF Departures		No	-	
ILS/DME	09C	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	-	
LNAV/VNAV		No	-	

Assessed Procedure	Runway	Impact	Minima caused by obstacle	Comments
RNP-AR		No	-	-
RNP1-RF Departures		No	-	-
ILS/DME	09R	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	-	
LNAV/VNAV		No	-	
RNP-AR		No	-	
RNP1-RF Departures		No	-	
ILS/DME	27R	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	-	
LNAV/VNAV		No	-	
RNP-AR		No	-	
RNP1-RF Departures		No	-	
ILS/DME	27L	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	-	
LNAV/VNAV		No	-	
RNP-AR		No	-	
RNP1-RF Departures		No	-	
ILS/DME	27C	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	390 (300)	This is below the minima currently published in 2R environment.
LNAV/VNAV		No	390 (300)	
RNP-AR		No	-	-
RNP1-RF Departures		No	-	-
ILS/DME	27R	No	-	Assumption that the same configuration as todays 2R environment.
LOC/DME		No	-	
LNAV		No	560 (470)	

Assessed Procedure	Runway	Impact	Minima caused by obstacle	Comments
LNAV/VNAV		No	380 (290)	This is in line with minima currently published in 2R environment. Additional assessment can lower these minima if required as obstacle sits in the secondary area.
RNP-AR		No	-	-
RNP1-RF Departures		No	-	-
VISUAL CIRCLING	NA	No	-	Assuming the same sectors as per todays 2R environment.
MSA	NA	No	-	-

Table 3: Obstacle Analysis in 3R Environment

Conclusion

This assessment concludes that it does not impact the assessed IFPs for the two existing runways or the planned third runway at London Heathrow Airport.



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