

IFP Safeguarding
Warehouse, Horton Road
Heathrow Airport

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CL-5845-RPT-003 V1.1

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Executive Summary

Harvest Land Management (the Client) is facilitating the development of a proposed warehouse building in Horton Road, West Drayton approximately 2.07 nautical miles north of London Heathrow Airports (LHR) Aerodrome Reference Point (ARP).

The purpose of the assessment is to determine if the proposed development infringes the protection areas/surfaces of the IFPs serving the Airport.

The report is only in respect of the IFPs currently published in the AIP and does not attempt to assess any effect on any possible future changes to the IFPs at Heathrow Airport, nor does it address any other aspects of aerodrome safeguarding.

The IFP safeguarding assessment found that the proposed data centre, based on the derived coordinates and a maximum elevation of 53.07 m, does not impact the currently published IFPs at Heathrow Airport.

Overview

The development is located approximately 2.07 NM to the north of the ARP as indicated in Figure 1.

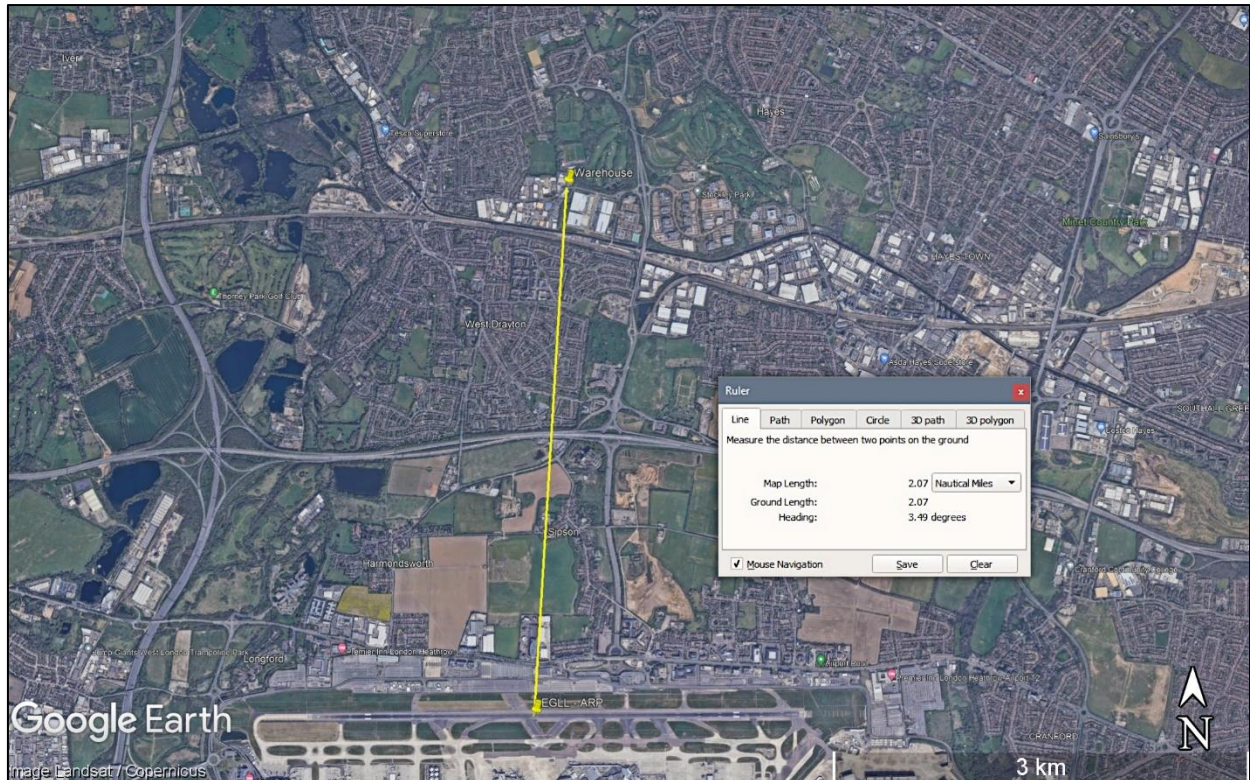


Figure 1: Obstacle Position from ARP

IFP's Assessed

The following IFPs, as published in the UK Aeronautical Information Publication (AIP) were assessed.

- ATC SURVEILLANCE MINIMUM ALTITUDE CHART
- STANDARD DEPARTURE - INSTRUMENT (SID) COMPTON 3F 3G 5J 4K
- STANDARD DEPARTURE - INSTRUMENT (SID) MAXIT 1F 1G MODMI 1J 1K
- STANDARD DEPARTURE - INSTRUMENT (SID) BROOKMANS PARK 7F 7G 6J 5K
- STANDARD DEPARTURE - INSTRUMENT (SID) UMLAT 1F 1G ULTIB 1J 1K
- STANDARD DEPARTURE - INSTRUMENT (SID) DET 2F 2G 1J 1K
- STANDARD DEPARTURE - INSTRUMENT (SID) GOGSI 2F 2G GASGU 2J 2K
- STANDARD DEPARTURE - INSTRUMENT (SID) MAYFIELD 3F 2G 2J 2K
- INITIAL APPROACH PROCEDURES ILS RWY 09L/R Without Radar Control via BIG and OCK
- INITIAL APPROACH PROCEDURES ILS RWY 09L/R Without Radar Control via BNN and LAM
- INITIAL APPROACH PROCEDURES ILS RWY 27L/R Without Radar Control via BIG
- INITIAL APPROACH PROCEDURES ILS RWY 27L/R Without Radar Control via OCK
- INITIAL APPROACH PROCEDURES ILS RWY 27L/R Without Radar Control via BNN and LAM
- INITIAL APPROACH PROCEDURES ILS RWY 09L/R Without Radar Control via CHT and EPM
- INITIAL APPROACH PROCEDURES ILS RWY 27L/R Without Radar Control via CHT and EPM
- INSTRUMENT APPROACH ILS/DME I-AA RWY 09L
- INSTRUMENT APPROACH LOC/DME I-AA RWY 09L

- INSTRUMENT APPROACH RNP RWY 09L
- INSTRUMENT APPROACH ILS/DME I-BB RWY 09R
- INSTRUMENT APPROACH LOC/DME I-BB RWY 09R
- INSTRUMENT APPROACH RNP RWY 09R
- INSTRUMENT APPROACH ILS/DME I-LL RWY 27L
- INSTRUMENT APPROACH LOC/DME I-LL RWY 27L
- INSTRUMENT APPROACH RNP RWY 27L
- INSTRUMENT APPROACH ILS/DME I-RR RWY 27R
- INSTRUMENT APPROACH LOC/DME I-RR RWY 27R
- INSTRUMENT APPROACH RNP RWY 27R

Assessment of all procedures excluding the LNAV/VNAV portion of the RNP procedures, were performed by IFP Design Ltd under contract to Cyrrus Ltd.

Data

The following data was received from the Client for the purpose of this assessment:

- 0203_Ground floor plan.pdf
- 0203_Site location plan.pdf
- 0203_West and East Elevations.pdf
- Beaches Yard Aviation grid reference points.ppt
- Information of Beaches Yard, West Drayton.pdf
- MB-SURV-BY-TS-01.pdf
- MB-SURV-BY-TS-2D.dwg
- Copy of IFP-011 V1.3 Safeguarding Client Information Form.xls

Discrepancies and Assumptions

The client provided the location of the site in OSGB format; however, it was noted that the latitude and longitudinal positions had been swapped around using the Grid Reference finder in the IFP-011 form.

Using Grid Inquest, the OSGB coordinates were transformed into UTM30N and confirmed against data provided in the 'Beaches Yard Aviation grid reference points.ppt' presentation.

A polyline as a 'contour' was used between all points with 20 m radius and maximum elevation of 53.07m AMSL for the assessment.

The data from the Client for the purpose of this assessment is indicated in Table 1.

Obstacle (No/Name)	Easting OSGB36)	Northing (OSGB36)	Obstacle (m)	Radius (m)	Ground Level (m AMSL)	Elevation (m AMSL)
BC_1	507104	180347	17.3	20	33.1	50.4
BC_2	507145	180352	18.1	20	34.97	53.07
BC_3	507176	180437	15.97	20	35.23	51.2
BC_4	507137	180435	15.89	20	34.51	50.4

Obstacle (No/Name)	Easting (OSGB36)	Northing (OSGB36)	Obstacle (m)	Radius (m)	Ground Level (m AMSL)	Elevation (m AMSL)
BC_5	507118	180412	17.65	20	33.84	51.49

Table 1: Positional Data

Obstacle (No/Name)	Easting (OSGB36)	Northing (OSGB36)	Latitude (UTM30N)	Longitude (UTM30N)
BC_1	507104	180347	51.51190941	-0.45797137
BC_2	507145	180352	51.51194659	-0.45737927
BC_3	507176	180437	51.51270471	-0.45690691
BC_4	507137	180435	51.51269412	-0.4574693
BC_5	507118	180412	51.51249099	-0.45774998

Table 2: Positional Data Transformed

IFP Safeguarding Assessment

An IFP Safeguarding assessment was completed against the applicable procedures for Runways 09L/27R and 09R/27L at Heathrow Airport.

Due to the technical nature of the information, this report is a distillation of the IFP modelling and subsequent assessment of the obstacles, the full data set is available if required. The purpose of this report is to identify what procedures were assessed and whether there is an impact, in the event of an impact, potential mitigation is provided¹. Where an impact was identified, only the assessment of the respective segment for said procedure, is provided.

Table 3 provides an impact summary of all the IFPs that were assessed.

Procedure	Runway	Impact	Comment
ATCSMAC	All	No	Nil
MSA		No	Nil
Visual Circling		No	Nil
IAP Without Radar Control		No	Nil
ILS/DME I-AA	09L	No	Nil
LOC/DME I-AA		No	Nil
RNP		No	Nil
VSS		No	Obstacle Falls Outside Protection Areas
SIDs		No	Nil
ILS/DME I-BB	09R	No	Nil
LOC/DME I-BB		No	Nil

¹ Mitigation for the IFPs is for the Airport (Sponsor) to decide upon as these may have a direct impact on their operations. It is recommended that further discussion and guidance is obtained from the CAA.

Procedure	Runway	Impact	Comment
RNP		No	Nil
VSS		No	Obstacle Falls Outside Protection Areas
SIDs		No	Nil
ILS/DME I-LL	27L	No	Nil
LOC/DME I-LL		No	Nil
RNP		No	Nil
VSS		No	Obstacle Falls Outside Protection Areas
SIDs		No	Nil
ILS/DME I-RR	27R	No	Nil
LOC/DME I-RR		No	Nil
RNP RWY		No	Nil
VSS		No	Obstacle Falls Outside Protection Areas
SIDs		No	Nil

Table 3: IFP Assessment Impact Summary

IFPs Not Assessed

The following IFPs, although considered, were not assessed. The Standard Instrument Arrival Routes (STARs) generally fall outside of where the obstacles are located and have a lowest level of FL070:

- RNAV1 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) OTMET 1H ROXOG 1H
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) ALESO 1H LAM 1X TANET 1Z
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) OCK 1Z
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) NUGRA 1H BEDEK 1Z LAM 1Z
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) HON 1H
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) BARM 1H LOGAN 2H
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) BEDEK 1H TOBID 1X
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) HAZEL 1H
- RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) BIG 1Z LAM 1Y
- RNAV1 (DME/DME or GNSS) STANDARD ARRIVAL - INSTRUMENT (STAR) FITBO 1H

Conclusion

The proposed Warehouse, Horton Road development has no impact to the IFPs for Runway 09R/27L and 09L/27R at Heathrow Airport.

