YOUR LONDON AIRPORT Gatwick

DVOR Rationalisation

EGKK Impact Assessment & Options Analysis

DOCUMENT CONTROL

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1 Contents

2 Executive Summary

In 2018 NATS (En Route) PLC (NERL) wrote to aerodromes with formal notice of the UK NAVAIDs Rationalisation Project outlining that NERL is increasing the use of satellite navigation technology across its operations and, liaising with the CAA, undertaking a project to phase out the general use of ground-based radio navigational aids (NAVAIDs). As part of this project, 30 DVORs and NDBs are being withdrawn, of these 11 will impact Gatwick Airport Ltd (GAL). All dependencies are required to be removed by December 2023. NERL are also in the process of updating the DME network however this proposal is still being finalised and details are not yet available. This report assumes that any DME's collocated with the DVORs due to be withdrawn will also be withdrawn.

This impact assessment document has reviewed the impacts to Gatwick's operation as a result of NAVAID rationalisation covering the following areas:

- GAL (EGKK) Aeronautical Information Publication (AIP) including:
  - Instrument Flight Procedures (IFPs)
  - Charts,
  - Noise Preferred Routes,
  - Textual changes to the AIP, and
  - Visual Reference Points (VRPs)
- ATC MATS Part 2 and Letters of Agreement

Following the impact assessment, nine mitigation options were identified and section 7 of this report analyses the benefits, drawbacks and risks of each option specifically to each impact identified as part of section 5 of this document.

Following analysis, a team formed of representatives from Gatwick Airport, ATM specialists, and representatives of Gatwick ATC have reviewed the Impact Assessment and the options available. Following consideration of the benefits, impacts and risks of all available options, and given that Gatwick is in the process of undertaking an ACP driven by wider airspace modernisation, the preferred options outlined below have been identified:

Preferred Option

Impacted Area	Mitigation Option	Anticipated ACP Level
HARDY 1M 1V SID	Withdraw the procedure	Level 0
SIDs and IAPs without radar control	RNAV Substitution	Level 2C
SRAs	Withdraw	Level 0
VRPs	Reference by other means	n/a - CAA Project
IAPs	Resolve within the 5YR	n/a - the CAA have confirmed the VOR impacts within the IAPs can be actioned as part of Gatwick's 5-year review and remain outside of the CAP1616 process.

Impacted Area	Mitigation Option	Anticipated ACP Level
Textual references in AIP	Resolve within 5YR and as part of RNAV Substitution updates	

As per the process outlined within the CAP1781 guidance, GAL are therefore submitting this Impact assessment and Options Analysis document to the CAA to seek early approval.

Following review and acceptance by the CAA, Gatwick will move onto the next steps in the CAP1781 process which is to submit Statement of Need(s), and to gather the necessary evidence items in support of a request to the CAA for approval.

3 Introduction

In 2018 NATS (En Route) PLC (NERL) wrote to aerodromes with formal notice of the UK NAVAIDs Rationalisation Project outlining that NERL is increasing the use of satellite navigation technology across its operations and, liaising with the CAA, undertaking a project to phase out the general use of ground-based radio navigational aids (NAVAIDs). As part of this project, 30 DVORs and NDBs are being withdrawn, of these 11 will impact Gatwick. All dependencies are required to be removed by December 2023.

This document contains an impact assessment of all published conventional procedures, MATS Part 2 information, and letters of agreement, to understand the dependencies for the respective conventional NAVAIDs due to be decommissioned. Following the impact assessment, Gatwick has identified potential mitigation options and reviewed the benefits and risks of each. The document is split into the following sections:

- **Identify NAVAIDs to be withdrawn:** Section 4 of this document provides an overview of the NERL DVOR rationalisation project, the navigation aids due to be withdrawn, and the timelines for withdrawal.
- **Complete an impact assessment:** Section 5 of this document outlines the impacts specific to EGKK as a result of the rationalisation programme. These are split into four key areas: IFPs and Charts, Noise Preferred Routes, textual changes to the AIP, and Visual Reference Points (VRPs). This section also reviews the MATS Part 2 and Gatwick's Letters of Agreement.
- **Identify options for the removal of dependencies:** Section 6 of this document provides a high level overview of the options available to mitigate the navigation aid rationalisation.
- **Analyse options:** Section 7 of this document looks at each option identified in Section 6, and reviews it specific to EGKK, detailing the possible advantages, disadvantages and any risks.
- **Conclusion:** Section 8 of this document takes the outcomes from Section 7 and draws conclusions from the options assessment.

3.1 Scope

The scope of this document is to investigate the impacts of VOR rationalisation and the potential mitigation of those impacts in order to remove dependencies on the VORs within the timeframes required by NATS NERL. **The scope of this document does not include review or mitigation of procedures that are not impacted by VOR rationalisation.** If the CAA have a regulatory requirement for GAL to review procedures outside of the scope of VOR rationalisation then this would form a separate piece of work which would be informed by any associated formal regulation/guidance provided by the CAA.

3.2 Assumptions

When undertaking the assessment of mitigation options as part of this document, it has been assumed that Future Airspace Strategy Implementation South (FASI-S) and the Gatwick FASI-S ACP (ACP-2018-60) are to go ahead. It is also assumed that the northern runway project will go ahead and any required Instrument Flight Procedures (IFPs) to support that runway will be developed as part of a separate ACP.

4 Overview of DVOR Rationalisation

In 2008, NERL commenced a project that aims to remove dependencies on ground-based NAVAIDs. The project to remove NERL's en route dependency on NAVAIDs was developed in consultation with the CAA and was approved by a UK National ATM Advisory Committee (NATMAC) formal consultation in 2008-9.

In 2018 NERL wrote to aerodromes with formal notice of the UK NAVAIDs Rationalisation Project outlining that NERL is increasing the use of satellite navigation technology across its operations and, liaising with the CAA, undertaking a project to phase out the general use of ground-based radio navigational aids (NAVAIDs).

The formal notice explained that NERL will remove its remaining en route NAVAID dependencies by December 2019. All airports are required to have removed all dependencies from the following NAVAIDs by December 2022:

Table 1 All NAVAIDS due to be withdrawn

DVORs and associated DMEs		NDBs
Barkway	Lambourne	Burnham
Biggin Hill	London	Chiltern
Bovingdon	Lydd	Epsom
Brecon	Manchester	Henton
Brookmans Park	Mayfield	New Galloway
Daventry	Midhurst	Westcott
Detling	Ockham	Whitegate
Dover	Perth	Woodley
Gamston	Southampton	
Glasgow	Turnberry	
Goodwood	Trent	

At the time of writing this document (December 2022) NERL have stated that they require aerodromes to remove dependencies to all of the navigation aids in the table above by December 2023. As outlined in the original letter, it may be possible for NERL to delay decommissioning and continue its support infrastructure on a reasonable endeavours basis, if an airport or group of airports present an appropriate extension proposal.

5 Impact Assessment

This impact assessment will review all of the Gatwick's (EGKK) AIP and identify where NAVAID rationalisation impacts published procedures and AIP text. Impacts will generally be categorised into two categories, major and minor, with a high-level summary of the impact. Major impacts are defined as when a rationalised NAVAID is fundamental to a procedure e.g. a VOR radial is used for track keeping, or a waypoint is defined by a NAVAID. Minor impacts are defined as when a NAVAID is referenced however the procedure/chart is not dependent on that NAVAID. Appendix A contains the full text and charts of the AIP and has been marked up to highlight the areas that will be impacted as a result of NAVAID rationalisation.

We have first provided an overall list of the navigations aids due to be withdrawn that impact EGKK before breaking down the impacts into specific details. The navigation aids due to be withdrawn after December 2023 that will impact EGKK are:

Table 2 Navigation Aids due to be withdrawn that will impact Gatwick

Navigation Aid Type	ID	Name of station
DVOR	OCK	Ockham
	GWC	Goodwood
	LAM	Lambourne
	MID	Midhurst
	BIG	Biggin
	MAY	Mayfield
	SAM	Southampton
	DET	Detling
	DVR	Dover
	LON	London
NDB	EPM	Epsom

5.1 IFP and Charting

The most significant area of impact will be to EGKK's published conventional Instrument Flight Procedures (IFPs) and their associated charts.

Table 3 below outlines the IFPs and associated charts that are impacted as are result of the NAVAID Rationalisation and provides a high-level summary of the NAVAIDs referenced as part of each procedure. Appendix A contains the full textual details of the AIP and marked up charts.

Table 3 Impacted IFPs and Charts

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
Chart	AERODROME CHART - ICAO	None	Not impacted by VOR rationalisation. No further assessment required under the scope of CAP1781.
	AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING CHART - ICAO	None	
	AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING STAND COORDINATES	None	
	GROUND MOVEMENT CHART HOLDING AREAS - ICAO	None	
	AERODROME CHART CODE F AIRCRAFT GROUND MOVEMENT - ICAO	None	
	AIRCRAFT GROUND MOVEMENT - REMOTE DE-ICING AREAS LOCATION CHART - ICAO	None	
NPRs	NOISE PREFERENTIAL ROUTEINGS	Major	Noise Preferred Routings and their associated chart will require amendments to remove **dependencies on OCK, MID, DET, DVR and MAY DVORs.**

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
Chart	ATC SURVEILLANCE MINIMUM ALTITUDE CHART	Minor	Chart will require minor textual amendments to remove references to NAVAIDs.
SIDs (and associated charts)	INSTRUMENT (SID) RWY 08R/L LAM 5P 5W	Major	**Procedures dependent on BIG, LAM, DET.** Reporting point: ACORN defined on BIG, LAM and DET VOR/DME fixes.
	INSTRUMENT (SID) RWY 26L/R LAM 6M 6V	Major	**Procedures dependent on BIG, LAM, DET.** Reporting point: ACORN defined on BIG, LAM and DET VOR/DME fixes.
	INSTRUMENT (SID) RWY 08R/L 26L/R FRANE 1M 1V 1P 1W - ICAO	Major	**Procedure dependent on DET, DVR and BIG.** Reporting point: TUNBY defined on DVR, BIG, and DET VOR/DME fixes. ACORN defined on BIG, LAM and DET VOR/DME fixes. FRANE defined on DET and CLN VOR/DME fixes.
	INSTRUMENT (SID) RWY 26L/R HARDY 5M 5V BOGNA 1M 1V	Major	**Procedures dependent on OCK, MID, GWC.** Reporting points: BOGNA defined on GWC and MID VOR/DME fixes. HARDY defined on GWC VOR/DME fix. (HARDY is also defined on SFD DVOR fix which is due to remain).
	INSTRUMENT (SID) RWY 08R/L 26L/R KENET 3P 3W NOVMA 1M 1V SAM 3P 3W	Major	**Procedures dependent on SAM, GWC, MID, DET.** Reporting points: NOVMA defined on MID VOR/DME fix. KENET defined on LON and GWC VOR/DME fixes.
	INSTRUMENT (SID) RWY 08R/L 26L/R SFD 5M 5V 9W 9P	Minor	Textual amendments: refences to MAY and MID
	INSTRUMENT (SID) RWY 26L/R WIZAD 4M 4V	Major	**Procedures dependent on MAY, DVR.** Reporting point: WIZAD defined on DVR and MAY VOR/DME fixes.
	RWY 08R/L 26L/R MIMFO 1M 1V DVR 2P 2W		**Procedures dependent on DET, DVR, BIG.** Reporting points: MIMFO defined on DVR and DET VOR/DME fix. ACORN defined on BIG, LAM and DET VOR/DME fix.

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
			TUNBY defined on DVR and BIG VOR/DME fix.
	INSTRUMENT (SID) RWY 26L/R TIGER 3M 3V DAGGA 1M 1V - ICAO	Major	**Procedures dependent on LAM, MAY, DET.** Reporting points: TIGER defined on MAY VOR/DME fix. DAGGA defined on DET VOR/DME fixes. (DAGGA is also defined on CLN DVOR fix which is due to remain)
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R LAM 1Z - ICAO	None	Not impacted by VOR rationalisation. No further assessment required within the scope of CAP1781.
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R FRANE 1Z - ICAO	None	
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L BOGNA 1X HARDY 1X - ICAO	None	
	RNAV1 (DME/DME OR GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R 26L IMVUR 1Z NOVMA 1X - ICAO	None	
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R 26L SFD 4Z 1X - ICAO	None	
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L WIZAD 1X - ICAO	None	

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R ODVIK 2Z - ICAO	None	Not impacted by VOR rationalisation. No further assessment required within the scope of CAP1781.
	RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L TIGER 1X DAGGA 1X - ICAO	None	
	STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 08R LAM 1Z FRANE 1Z	None	
	STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L BOGNA 1X HARDY 1X	None	
	STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 08R IMVUR 1Z RWY 26L NOVMA 1X RWY 08R SFD 4Z RWY 26L SFD 1X	None	
	STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L WIZAD 1X RWY 08R ODVIK 2Z	None	
	STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L TIGER 1X DAGGA 1X	None	
IAPs without Radar Control (and	INITIAL APPROACH PROCEDURES ILS RWY 08R Without Radar Control	Major	**Procedure dependent on MID, MAY.** Reporting points: WILLO defined on MID VOR/DME fix. HOLLY defined on MID VOR/DME fix. TIMBA defined on MAY/VOR fix.

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
associated charts)	INITIAL APPROACH PROCEDURES ILS RWY 26L Without Radar Control	Major	**Procedure dependent on MID, MAY.** Reporting points: WILLO defined on MID VOR/DME fix. HOLLY defined on MID VOR/DME fix. TIMBA defined on MAY/VOR fix.
Approaches (and associated charts)	ILS/DME RWY 08R	Minor	Dependent on MAY (Overhead VOR and DME) as Missed Approach RCF procedures require aircraft to proceed to MAY to commence another Initial Approach.
	LOC/DME RWY 08R	Minor	
	ILS/DME RWY 26L	Minor	
	LOC/DME RWY 26L	Minor	
	RNP RWY 08R	Minor	Dependent on MAY (Overhead VOR and DME) as Missed Approach RCF procedures require aircraft to proceed to MAY to commence another Initial Approach.
	RNP RWY 08L	Minor	
	RNP RWY 26L	Minor	
	RNP RWY 26R	Minor	
	SRA RTR 2 NM RWY 08R	Minor	Dependent on MAY (Overhead VOR and DME) as Missed Approach RCF procedures require aircraft to proceed to MAY to commence another Initial Approach.
	SRA RTR 2NM RWY 08L	Minor	
	SRA RTR 2NM RWY 26L	Minor	
	SRA RTR 2 NM RWY 26R	Minor	
	STANDARD INSTRUMENT ARRIVAL CODING TABLES BARMI 1G TEBRA 2G KONAN 2G	None	Not impacted by VOR rationalisation. No further assessment required within the scope of CAP1781.
	STANDARD INSTRUMENT ARRIVAL CODING TABLES MID 1X NEVIL 1G KUNAV 1G	None	
	STANDARD INSTRUMENT ARRIVAL CODING TABLES OTMET 1G VASUX 1G AMDUT 1G ARNUN 1G	None	

Procedure Group	Procedure Details (Grouped based on charts in AIP)	Impact	Summary of impacts
	STANDARD INSTRUMENT ARRIVAL CODING TABLES TELTU 1G DISIT 1G KIDLI 1G	None	Not impacted by VOR rationalisation. No further assessment required within the scope of CAP1781.
	STANDARD INSTRUMENT ARRIVAL CODING TABLES ABSAV 1G BEDEK 1G GWC 1G	None	
	RNAV HOLD CODING TABLES ADLOG AMDUT ARNUN BILNI DELBO DOMUT GOKTU	None	
	RNAV HOLD CODING TABLES GWC KATHY TIMBA WILLO	None	
	INSTRUMENT APPROACH PROCEDURE CODING TABLES - RNP RWY 08L/R and 26L/R	None	

5.2 Noise Preferred Routes

EGKK's noise abatement procedures, and their predicated SIDs, reference multiple DVORs and DMEs due to be withdrawn. Table 4 below provides an impact assessment of the Noise Preferred Routing Procedures:

Table 4 Impacted Noise Preferred Routes

Take-off Runway	ATC Clearance	Procedure	Impact	Summary of impact
26 L/R	Via ACORN (This route to be used only under Radar Control).	Straight ahead until I-WW DME 2.3 then turn right to intercept DET VOR RDL259 by DET DME 31 to ACORN.	Major	NPR is defined by the DET VOR and DME and ends at ACORN (RP) which is defined on BIG, LAM and DET VOR/DME fixes.
	Via BOGNA	Straight ahead and maintain track 258°. At MID DME 10.5 turn left to intercept OCK VOR RDL176. At OCK DME 28 turn left to intercept MID VOR RDL147 to BOGNA.	Major	NPR is defined by the MID DVOR and OCK DVOR and ends at BOGNA (RP) which is defined by GWC and MID VOR/DME fixes.
	Via Midhurst	Straight ahead and maintain track 258° to intercept MID VOR RDL064	Major	Dependent on MID VOR.
	Via SFD (This route to be used only from 2300 hours to 0600 hours local time)	Straight ahead and maintain track 258° until crossing SFD VOR R319 (I-WW DME 6.8) then turn left to intercept RDL312 to SFD VOR.	No impact	n/a
	Via Mayfield (This route to be used only from 0700 hours to 2300 hours local time)	Straight ahead until I-WW DME 2.3 then turn left to intercept MAY VOR RDL283 by MAY DME 13 to MAY VOR.	Major	Dependent on MAY DVOR.
	Circuit Flights	Straight ahead until I-WW DME 2.3 NM before turning across wind.	No impact	n/a

08 L/R	Via DET VOR R260	Straight ahead until I-GG DME 3.5 turn left to intercept DET VOR RDL260 to DET DME 43.	Major	Dependent on DET DVOR.
	Via ACORN	Straight ahead until I-GG DME 3.5 then turn left to track 052°M to intercept DET VOR RDL259 by DET DME 20 to ACORN.	Major	Dependent on DET DVOR and ends at ACORN (RP) which is defined on BIG, LAM and DET VOR/DME fixes.
	Via TUNBY	Straight ahead and maintain track 078° to intercept DVR VOR RDL271 to TUNBY.	Major	Dependent on DVR DVOR and ends at TUNBY (RP) which is defined on DVR, BIG, and DET VOR/DME fixes.
	Via Seaford	Straight ahead until I-GG DME 2.5 then turn right to intercept SFD VOR RDL344 to SFD VOR.	No impact	n/a
	Circuit Flights	Straight ahead until I-GG DME 2.5 before turning across wind.	No impact	n/a

Any option considered to mitigate the impact to the SIDs, should consider the NPRs and whether the option could result in changes to tracks which would impact noise and NAP adherence. Any changes to Gatwick's NPR definition would require DfT approval.

Alongside the impacts to the routes themselves, there are some further references within the textual parts of Section 2.21 that would be impacted as a result of NAVAID rationalisation. These sections will require amendment based on updates made to the IFPs and charts. These are highlighted in Appendix A.

5.3 Textual Changes to the AIP

The following sections of the AIP will require textual changes to remove references to withdrawn DVORs/procedures. These sections will require amendment based on updates made to the IFPs and charts. Appendix A shows the full AIP text and highlights where changes will be required.

- **EGKK AD 2.22.1 Procedures for inbound aircraft**: Reference to Mayfield holding pattern.
- **EGKK AD 2.22.2 Radio communication failure procedures**: Reference to holding points (TIMBA, WILLO, ASTRA, Mayfield). Refences to missed approach procedure (Mayfield). Refences to routes and levels to use when leaving the zone or holding area (Mayfield).

- **EGKK AD 2.22.4 Holding:** References to holding (WILLO, TIMBA and MAY).
- **EGKK AD 2.22.11 Procedures for outbound aircraft:** References to alternative SID Availability (MIMFO, FRANE, LAM). References to holding (LUMBA, MAY, MID).

5.4 Visual Reference Points

The VRPs promulgated in the EGKK section of the eAIP are provided for visual flight rules (VFR) flights to enable pilots to determine the aircraft's position based on ground-based navigation aids. All of EGKK's promulgated VRPs, shown in table 5 below, are given a co-ordinate, a VOR/VOR fix and a VOR/DME fix and these fixes will be impacted by NAVAID rationalisation.

Table 5 EGKK VRP Impact Assessment

VRP	VOR/VOR	VOR/DME Fix	Impact	Summary of Impact
Billingshurst 510054N 0002700W	MID RDL 109° GWC RDL 050°	MID 109°/7 NM	Yes	MID and GWC DVOR due to be decommissioned. VOR/VOR and VOR/DME fix would require replacement
Dorking 511337N 0002006W	BIG RDL 246° LON RDL 163°	BIG 246°/15 NM LON 163°/16 NM	Yes	BIG and LON DVOR due to be decommissioned.
Guildford 511422N 0003506W	MID RDL 007° BIG RDL 257°	MID 007°/11 NM	Yes	MID and BIG DVOR due to be decommissioned.
Handcross 510310N 0001208W	MID RDL 090° SFD RDL 325°	MID 090°/16 NM MAY 280°/12 NM	Yes	MID and MAY DVOR due to be decommissioned. SFD would remain.
Haywards Heath 510027N 0000546W	MID RDL 097° SFD RDL 331°	MID 097°/20 NM MAY 266°/8 NM	Yes	MID and MAY DVOR due to be decommissioned. SFD would remain.

VRP	VOR/VOR	VOR/DME Fix	Impact	Summary of Impact
Tunbridge Wells 510800N 0001554E	BIG RDL 144° DET RDL 231°	BIG 144°/15 NM MAY 039°/9 NM	Yes	MID, DET, BIG and MAY DVOR due to be decommissioned.

The VRPs published in EGKK's AIP are already referenced with Lat Long coordinates as well as VOR/VOR and VOR/DME fixes. CAA are already removing reference to the conventional navigation aids, see AIC C 100/2021.

5.4.1 Controlled Airspace Infringement

GA may use DVOR/DMEs and NDBs not only to navigate from point to point but also to ensure they remain laterally clear of Controlled Airspace (CAS) structures such as the Gatwick CTR. GA should be engaged to understand impacts of the removal of the NAVAIDs on their ability to navigate and remain outside CAS. As outlined above, as the NAVAIDs are NERL assets, CAP1781 requires sponsors to share pertinent information with NERL and assist NERL with the engagement of these stakeholders using local knowledge.

5.5 MATS Part 2 Assessment

The EGKK MAN-ANS-002 Version 2.1 has been reviewed to identify where NAVAID rationalisation impacts the document. There are three places within the document that refer to VOR's due to be withdrawn and these are summarised in the table below. The full detail of the sections are shown in Appendix B.

A representative from ANS (Gatwick ATC) has confirmed that following a review of the MATS Part 2, there would be no operational impact to Gatwick Airport ANS as a result of NAVAID withdrawal and these references could be removed as part of the next revision.

Table 6 MATS Part 2 Impacts

MATs Part 2 Section	Details	Summary of impacts
4.6 Radio Failure	Radio fail procedures for NOVMA/SAM SID Departures: …and then turn onto a direct track to MID VOR…	Radio fail procedure dependent on MID VOR
5.11.1 Missed Approach Procedures	Runway 26L/R and Runway 08 R/L missed approach ends with 'proceed to MAY VOR not above 3000'.	Missed Approach Procedure dependent on MAY VOR
5.11.2 Missed Approach - RNP	Runway 26L/R and Runway 08 R/L missed approach ends with 'proceed to MAY VOR not above 3000'.	Missed Approach Procedure dependent on MAY VOR

These impacts reflect the impacts identified when reviewing the IFPs and Charts as part of Section 5, Table 3 of this document.

5.6 Letters of Agreement

A representative from ANS has reviewed Gatwick ATC LoAs and confirmed that these will not be impacted by NAVAID rationalisation.

6 Options for removal of dependencies

CAP1781 Chapter 5 provides an outline of options for Removal of Aerodrome Dependencies on Navigation Aids at risk and states that these options should be considered as a minimum if a sponsor wishes to proceed with an application under the RNAV Substitution Policy.

The following subsections take the suggested options from CAP1781, and build upon consideration which will be required for each option. As part of this impact assessment, consideration has also been given to mitigation options which fall outside of the CAP1781 suggestions.

Section 7 of this document takes the options outlined below and assesses the advantages, disadvantages and risks of each option against the impacts identified in Section 5.

6.1 Withdraw the Procedure

In some circumstances, when procedures are rarely flown or exist for specific circumstances that may no longer apply it may be appropriate to remove the procedure from the AIP.

The impact assessment in Section 7 will review whether this is appropriate in the case of EGKK.

6.2 Redefine on other NAVAIDs

If other suitable conventional navigation aids are available and coverage is suitable, it may be possible to redefine the existing procedures using these navigation aids.

The feasibility of this option will be dependent on NAVAID coverage, which is being significantly reduced as a result of the overall NAVAID rationalisation programme. In order to determine whether this option is suitable, it is recommended that a single procedure is selected that use a number of NAVAIDs, and a check undertaken to understand whether this option is feasible. For example, the 08L/R SAM 3P 3W is currently dependent on DET, SAM, GWC and LON DVOR and a study would look at future DVOR coverage and whether this procedure could be replicated using other, remaining NAVAIDs.

When considering this option, there also needs to be an awareness of the long term plans for the remaining navigation aids and whether these too may be withdrawn in future.

Finally, consideration needs to be given as to whether redefining the procedure may result in changes to flight tracks. This is because operators typically produce coded overlays to fly conventional procedures, and redefinition on other NAVAIDs may result in changes to the coding. Although on paper these changes would be negligible, when operated they may lead to changes to tracks over the ground or be interpreted as such. Details of the Navigation Aid Study are shown in Appendix C.

6.3 Truncate the Procedure / or Delete Reference to Navigation Aid

In some cases, it may be possible to truncate the procedure such that it either starts after the navigation aid being withdrawn (arrival) or completes before it (departure).

Departures may be able to be truncated as per the CAA's SID Truncation Policy, and follow a Level 2C airspace change, however it is important to note that this policy applies when it is proposed that:

- the end segment of a SID is replaced by a new RNAV ATS route;
- where the end segment of a SID is already aligned with an existing ATS route; and
- there is no change to the track over the ground or vertical profiles; and
- the SID is truncated at, or after, the final altitude/level attainment point is first reached and terrain clearance remains assured with the establishment of any ATS routes incorporated to replace the truncated section.

In the case of a truncation of a SID prior to the final end altitude, a full SID re-design and Level 1 ACP will be required.

6.4 Reference by Other Means

Traditionally some AIP entries such as VRPs and Reporting Points have included a VOR radial and distance in their definition as an aid to navigation. Subject to agreement by the CAA, where the item is defined by other means and the VOR radial and distance are an additional part of the definition then the VOR reference can be deleted. Where the item is only defined using the VOR radial and distance it may be possible to redefine it as a Lat/ Long.

AIP nomenclature changes, or changes to VRPs typically require a Level 0 ACP so long as it can be demonstrated that the change will not alter traffic patterns.

6.5 Provide ATC tactical Service

For some procedures it may be possible for ATC to provide a tactical service (including terrain clearance) as an alternative to aircraft using the procedure. In these instances, the Airspace Change Process may still apply (a Planned and Permanent Redistribution of traffic) as there would be a change to tracks over the ground.

The London TMA is a very complex and busy piece of airspace where the arrivals and departures from various airports are coordinated. This airspace is currently managed by a series of SIDs and STARs which connect to the overall network. Gatwick's SIDs are separated from the SIDs from adjacent airports (e.g. Heathrow) by a series of altitude restrictions. These would be highly complex and risky to replicate via a series of complex departure clearances.

Given the number of movements operated to and from EGKK, it is not feasible for these to be tactically controlled by ATC without having an impact on capacity and efficiency within the airspace and workload for Gatwick tower.

Furthermore, an Airspace Change would be required in order to implement this option as there would be a change to tracks over the ground. Considering this, the safety concerns, and how unsuited the option is to EGKK operations, other options would provide more suitable solutions to mitigate NAVAID withdrawal. We have therefore not taken this option forward for further analysis.

6.6 Reach an Agreement with NERL

If an aerodrome or group of aerodromes decides that all the other options for removal of dependencies are impractical and they wish to rely on a navigation aid which is due to be withdrawn beyond the December 2022 deadline it may be possible for NERL to delay decommissioning and continue its support of that navigation aid on a reasonable endeavours basis under commercial arrangements agreed between NERL and the aerodrome or group. This option would not be possible for those navigation aids expected to have life-expectancy issues in the period beyond 2022.

Consideration needs to be given to the risk of the NAVAID being continued on an 'reasonable endeavours basis' and any impacts which may result from a failure of the NAVAID that is not covered as part as part of the agreement.

6.7 Airspace Change (Replace the conventional procedure with PBN)

It is possible to undertake an ACP which aims to replicate the existing published conventional procedures using PBN design criteria as part of an Airspace Change proposal.

In the case of any ACP, consideration should be given around timelines and resources for a full-scale ACP, and whether this option is 'economically and socially undesirable' especially when Gatwick's FASI-S ACP is already in progress.

6.8 RNAV Substitution

When it can be demonstrated that all of the above options are not practicable and in the context of wider airspace modernisation to introduce a new ACP would be economically and socially undesirable, then it may be possible to consider applying for the use of RNAV substitution.

RNAV Substitution provides an additional option for certain procedures affected by removal of a particular navigation aid. It provides an interim step which gives procedure owners additional time to plan and implement their PBN strategy, including any consultation required by the Airspace Change Process, without preventing the navigation aid rationalisation programme from continuing.

Guidance for the use of RNAV Substitution (CAP 1781) allows aircraft able to fly the procedure using solely their Flight Management System (FMS) to continue to file and fly the procedure once a Navigation Aid is withdrawn. For those aircraft unable to fly the overlay alternative mitigation has to be identified. CAP 1781 allows conventional procedures to continue to be flown by suitably equipped aircraft using their FMS overlays until suitable alternatives to the conventional procedures are available. This may not be until 2026 (or later) where the alternative procedures are expected to be developed as part of major airspace modernisation.

RNAV substitution is based on the principle that if an FMS overlay already exists for a given conventional flight procedure, and the majority of aircraft are suitably equipped to use that overlay, then the majority of aircraft will already be using the FMS overlay to fly the procedure independent of the ground based navaids on which the procedure is defined. If that is the case, then removal of any navigation aid supporting that particular procedure will have little effect as the majority of aircraft will continue to fly exactly as they would if the navigational aid were still in place. This also

supports the argument that RNAV substitution will not lead to any changes in tracks over the ground, which would otherwise require a larger scale ACP.

6.9 Resolve as part of 5 year review

Instrument Flight Procedures (IFPs) are routinely checked every 5 years by an approved instrument flight procedure designer before being submitted to the CAA for regulatory review. As part of this 5 year review, there may be opportunities to resolve very minor impacts to remove dependencies on VORs, where those impacts will have no fundamental effect on a procedure or tracks over the ground. Where these opportunities exist, we will agree with the CAA that the 5 year review is the most appropriate method of mitigating the impact.

7 Options Analysis and preferred option

The following section takes the mitigation options described in Section 6 of this document and outlines the advantages, disadvantages, and any risks of each option specific for each impacted area identified in Section 5. Following analysis of the option, it was given a RAG status based on its suitability to mitigate against Navigation Aid withdrawal. This analysis will only consider the options that are within the scope of CAP1781 i.e. they are directly impacted by the VOR rationalisation programme as outlined section 5 of this document.

When considering the overall assessment, it's important to note that the purpose of this task is to identify an interim mitigation for VOR rationalisation, that ideally meets the NATS NERL timescales of December 2023 and provides a proportionate and viable solution. Gatwick is already undertaking the FASI-S ACP which seeks to modernise Gatwick's airspace and will remove dependency on conventional navigation; this ACP is currently anticipated to be implemented from 2026/2027 onwards.

Our preferred mitigation option for each area impacted is shown in bold; more information around this can be found in the conclusion section below.

Key	Not applicable	Unsuitable	Suitable but with risk	Suitable

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
Option Notes				Redefining on other NAVAIDs could not be achieved without changing tracks over the ground (see Appendix C of Impact Assessment) and subsequently requiring a Level 1 ACP. Aside from fundamentally changing tracks which makes this option unsuitable, a Level 1 ACP would involve a timeline and financial outlay which makes it unviable as an interim mitigation measure.		Although the RPs identified in Section 5 of the impact assessment could potentially be resolved through referencing by other means, the procedures that contain these RPs are dependent on DVORs for track keeping, and therefore other mitigation options that resolve the impacts for the whole procedure rather than just the reporting points have been considered as part of this assessment.	RNAV substitution would mitigate VOR withdrawal and would be a proportionate approach whilst the FASI-S ACP is progressed. The procedure charts would be updated to reflect 'RNAV substitution only'. As the procedures and NPRs would continue to be flown as they are coded today, there would be no changes to tracks over the ground. CAP1781 outlines that where an overlay procedure already exists in a navigation data base, and the Sponsor has assured the CAA that the tracks over the ground will not change, a Level 2C change may be appropriate. Given the Level 2C, an ACP for RNAV substitution could be progressed relatively quickly within the timelines of the NAVAID rationalisation project or with a small period of continuation with agreement from NERL	Gatwick could seek to reach an agreement with NERL which would mean the NPRs would remain as today. However the NAVAIDs would only remain on a reasonable endeavours basis and there is a risk of full failure and long term unavailability. These risks are not within Gatwick's control. In addition to this, in order for the NAVAIDs to remain, a contractual arrangement is required which is likely to be complex owing to the number of airport's dependent on the same VORs. Overall, although the option of reaching an agreement with NERL would resolve this reliance on the VORs, it is not considered the most appropriate mitigation due to these risks at this stage.	An airspace change provides an opportunity for all areas impacted by NAVAID rationalisation to be mitigated. As this option is able to resolve all of the impacted areas, it would appear under first glance to be the most appropriate option, however there are some significant dis benefits to this option. A level 1 ACP overall is not considered suitable because: •ACP timelines (typically a minimum of 2-3 years) would not align with NAVAID withdrawal deadline of December 2023, •There would be a high level of duplicate cost and effort given the FASI S ACP already underway, •There is a risk of consultation fatigue and confusion with impacted stakeholders given the ongoing FASI-S ACP, •No guarantee that the ACP will be successful. • Level 1 ACPs are a high cost, high effort and high-risk process and given FASI, it is not considered a financially viable or proportionate approach to have two large scale ACPs running in parallel.		

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
Charts	NOISE PREFERENTIAL ROUTEINGS	Major	Not suitable – NPRs required by DfT	See notes			RNAV Substitution would mitigate VOR withdrawal. NPRs would remain as flown today, however textual amendments to the routes would be required as the NAVAIDs no longer exist. Discussion with the DfT would be required in order to understand how any amendments would be achieved.	See notes	A Level 1 ACP would remove the dependencies on VORs however the new definitions of the NPRs will require agreement through a separate DfT process; the timescales for which are currently unknown as the process is yet to be published. The NPRs are linked to EGKK's SIDs and a Level 1 ACP is not considered the most appropriate option to mitigate the impacts of VOR rationalisation (See notes)		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO	Minor	Not suitable – chart required in EGKK AIP although references to the NAVAIDS could be removed from the chart (see 5YR section)					See notes	See notes	Whilst the chart cannot be withdrawn, references to the NAVAIDS can be removed from the chart.	Whilst the chart cannot be withdrawn, references to the NAVAIDS can be removed from the chart. Subject to CAA agreement, this could either form part of the 5 year review or part of a separate Level 0 ACP
Conventional SIDS	(SID) RWY 08R/L LAM 5P 5W	Major	Not suitable – procedure required for northern runway	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required.		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 26L/R HARDY 5M 5V	Major	The conventional HARDY SID is very rarely used and initially it follows the same SID route as the BOGNA SID (See below). Withdrawal of the HARDY SID would require network connectivity to be introduced by NATS NERL in order for any traffic flying the BOGNA SID to have network connectivity to HARDY and onward into the network. A DCT is considered the most appropriate way to mitigate this and the CAA have confirmed that this would be acceptable. In order for a DCT route to be implemented, NATS system and flight planning teams would require notification, in order to accomplish adaptation changes and NMOC testing; at present there is no process for this to occur within the scope of the CAP1781 guidance. Note, any requirement for an ATS route would make the benefits of withdrawing the conventional HARDY SID disproportionate compared to work involved to developed the route structure. Withdrawal of this one conventional procedure would remove the procedure's dependency on GWC, MID, OCK and SFD however this would not resolve Gatwick's wider dependency on these VORs. It would require a Level 0 ACP.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required. Although it may be possible to truncate the SID to remove dependencies on GWC, this would require a new waypoint to be defined (which involves detailed IFP work), the truncated route would still be dependent on other VORs due to be withdrawn, and it would require resource from NATS NERL that cannot be delivered within the required timeframes (See NERL Engagement Appendix C). Owing to how few aircraft fly the SID, any environmental benefits of truncation would be negligible. On balance, it would therefore be disproportionate to truncate to remove dependencies on GWC.		See notes	See notes	See notes		Withdrawing the procedure is considered to be the most appropriate mitigation, provided that a DCT may be used to provide network connectivity between BOGNA and HARDY.

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
	(SID) RWY 26L/R BOGNA 1M 1V	Major	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required. Although it may be possible to truncate the SID to remove dependencies on GWC, this would require a new waypoint to be defined (which involves detailed IFP work), the truncated route would still be dependent on other VORs due to be withdrawn, and it would require resource from NATS NERL that cannot be delivered within the required timeframes (See NERL Engagement Appendix C). Owing to how few aircraft fly the SID (<1 per day on average in 2022), any environmental benefits of truncation would be negligible. Finally, the SID would still require a separate mitigation as it would still be dependent on VORs due to be withdrawn. On balance, it would therefore be disproportionate to truncate to remove dependencies on GWC.		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 08R/L KENET 3P 3W	Major	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required. The procedure could be truncated to remove dependencies on GWC VOR however it would still be dependent on SAM and DET. Truncation therefore would not resolve the impacts of VOR rationalisation and would incur expense (c.£60k for Gatwick) and time. In addition to this, NATS NERL have highlighted that their priority is to remove dependencies on the VORs rather than truncations and it would require resource from NATS NERL that cannot be delivered within the required timeframes (See NERL Engagement Appendix C). Usage levels of the KENET SID (c.6 aircraft per month) would result in almost negligible environmental benefit. Finally, even if truncated to remove dependencies on GWC, other Gatwick procedures would remain dependent on Goodwood and to truncate the KENET SID would be complex; at present the RNAV1 KENET SID is truncated at a waypoint that does not have a corresponding fix on the conventional procedure. This would require IFP definition. On balance, it would therefore be disproportionate to truncate the KENET SID and therefore it is not considered an appropriate mitigation.		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
	(SID) RWY 26L/R NOVMA 1M 1V	Major	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 08R/L SAM 3P 3W – ICAO	Major	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 26L/R WIZAD 4M 4V	Major	The WIZAD SID is currently used tactically to help reduce demand pressure on the airfield and local sectors on a case by case basis, such as weather avoidance to the north of the airfield. Due to limitations within the NERL airspace network at DVR, the SID is not used on a routine basis however NERL are in the process of reviewing this constraint. This means that, at present, the SID is not operated at the same volumes as the other main departure SIDs however it is very important that it remains available on a tactical basis; without it, in certain scenarios there would be a decrease in flexibility and capacity to handle operational disruption which would impact the Gatwick and NERL operation. The withdrawal of a SID comes with significant risk because it would not be possible to reinstate without a full CAP1616 ACP which is a high cost, high effort and high-risk process. Although Gatwick do not have any immediate plans to operate WIZAD on a regular basis, the withdrawal of this SID would prevent an opportunity for this to be explored (subject to NERL feasibility and approval of a PPR) Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
			IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.								
	(SID) RWY 26L/R TIGER 3M 3V	Major	The TIGER SID is currently used tactically to help reduce demand pressure on the airfield and local sectors on a case by case basis, such as weather avoidance to the north of the airfield. This means that, at present, the SID is not operated at the same volumes as the other main departure SIDs however it is very important that it remains available on a tactical basis; without it, in certain scenarios there would be a decrease in flexibility and capacity to handle operational disruption which would impact the Gatwick and NERL operation. The withdrawal of a SID comes with significant risk because it would not be possible to reinstate without a full CAP1616 ACP which is a high cost, high effort and high-risk process. Although Gatwick do not have any immediate plans to operate TIGER on a regular basis, the withdrawal of this SID would prevent an opportunity for this to be explored (subject to NERL feasibility and approval of a PPR). Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
			period before FASI implementation.								
	(SID) RWY 26L/R DAGGA 1M 1V	Major	The DAGGA SID is currently used tactically to help reduce demand pressure on the airfield and local sectors on a case by case basis, such as weather avoidance to the north of the airfield. This means that, at present, the SID is not operated at the same volumes as the other main departure SIDs however it is very important that it remains available on a tactical basis; without it, in certain scenarios there would be a decrease in flexibility and capacity to handle operational disruption which would impact the Gatwick and NERL operation. The withdrawal of a SID comes with significant risk because it would not be possible to reinstate without a full CAP1616 ACP which is a high cost, high effort and high-risk process. Although Gatwick do not have any immediate plans to operate TIGER on a regular basis, the withdrawal of this SID would prevent an opportunity for this to be explored (subject to NERL feasibility and approval of a PPR). Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
	(SID) RWY 08R/L SFD 9W 9P	Minor	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes	As the references to MAY are not fundamental to the procedure, it may be possible to remove them as part of the 5YR however given the additional cost of exploring this, and Gatwick's operators are already flying RNAV overlays, the preferred mitigation option is to include this procedure as part of wider package of mitigation work.	RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 26L/R SFD 5M 5V	Minor	Not suitable – this procedure forms part of Gatwick's main suite of SIDs that are required for northern runway operations. Withdrawing the procedure from the southern runway only would not resolve GAL's overall dependency on the VORs as the northern runway procedures would remain. In addition to this, withdrawal of the procedure would involve time and expense to undertake a Level 0 ACP and also separate the southern runway IFPs from the northern IFPS (as they are currently published on the same plates). Given this, other mitigation options that remove dependency on the VORs as part of a broader package of mitigation (see RNAV substitution) are considered more proportionate for the interim period before FASI implementation.	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes	As the references to MID are not fundamental to the procedure, it may be possible to remove them as part of the 5YR however given the additional cost of exploring this, and Gatwick's operators are already flying RNAV overlays, the preferred mitigation option is to include this procedure as part of wider package of mitigation work.	RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
Conventional SIDS (Route 4)	(SID) RWY 26L/R LAM 6M 6V	Major	Not suitable – Route 4 procedure required for both runways	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	(SID) RWY 08R/L 26L/R FRANE 1M 1V 1P 1W	Major	Not suitable – Route 4 procedure required for both runways	See notes	Truncation already taken place. Procedure remains dependent on DET therefore full SID redesign and Level 1 ACP required.		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	RWY 08R/L 26L/R MIMFO 1M 1V	Major	Not suitable – Route 4 procedure required for both runways	See notes	Truncation already taken place. Procedure remains dependent on VORs therefore full SID redesign and Level 1 ACP required.		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	RWY 08R/L 26L/R DVR 2P 2W	Major	Not suitable – Route 4 procedure required for both runways	See notes	Impacts of the VOR withdrawal occur before the last altitude restriction. Subsequently, as per the CAA's SID Truncation Policy, a full SID redesign and a corresponding Level 1 ACP would be required		See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
IAPs without Radar Control	IAP ILS RWY 08R Without Radar Control	Major	Not suitable – procedure required	See notes			See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
	IAP ILS RWY 26L Without Radar Control	Major	Not suitable – procedure required	See notes			See notes	See notes	See notes		RNAV Substitution is considered the most appropriate mitigation for VOR withdrawal
IAPS	ILS/DME RWY 08R - ICAO	Minor	Not suitable – procedures required. Given the minor impacts identified, to withdraw would result in Gatwick not having any approach procedures and would be a disproportionate option compared to other mitigation options.	See notes		The 5 year review will provide an opportunity to mitigate the impacts of VOR rationalisation by referencing the VORs by other means. (See 5 year review section) No change to tracks over the ground will result from these updates.		See notes	See notes	The 5 Year review provides the opportunity to remove the RCF procedures on IAP charts and add procedures to the AD2.22 section of the AIP.	The 5 year review offers the most appropriate opportunity to mitigate the impacts of VOR withdrawal for these procedures
	LOC/DME RWY 08R - ICAO	Minor									
	ILS/DME RWY 26L - ICAO	Minor									
	ILS/DME RWY 26L - ICAO	Minor									
	LOC/DME RWY 26L - ICAO	Minor									

Impacted Area	Details	Impact	Withdraw	Redefine on other NAVAIDs	Truncate Procedure	Reference by other means	RNAV Substitution	Reach an agreement with NERL	Level 1 Airspace Change	5 Year Review	Conclusion
	RNP RWY 08R - ICAO	Minor								The 5 Year review provides the opportunity to remove the RCF procedures on IAP charts and add procedures to the AD2.22 section of the AIP and upgrade the RNP APCH Conventional Missed Approaches to RNP Missed Approaches	
	RNP RWY 08L - ICAO	Minor									
	RNP RWY 26L - ICAO	Minor									
	RNP RWY 26R - ICAO	Minor									
IAPs (SRAs)			Level 0 ACP (ACP-2022-065) currently underway								Gatwick intend to continue with the Level 0 ACP to withdraw these procedures
VRPs	The AIP has been updated to remove references to conventional navigation aids within the VRP definitions										
Textual changes to AIP (Most Textual changes to the AIP will require updating as a result of any changes/updates made to the charts and procedures).	EGKK AD 2.22.1 Procedures for inbound aircraft: Reference to Mayfield holding pattern.									5 Year review to remove reference to RCF procedures on IAP charts and update procedures within AD2.22. The CAA have confirmed these actions can be actioned as part of Gatwick's 5-year review and remain outside of the CAP1616 process.	The 5 year review offers the most appropriate opportunity to mitigate the impacts of VOR withdrawal for these procedures
	EGKK AD 2.22.2 Radio communication failure procedures: Reference to holding points (TIMBA, WILLO, ASTRA, Mayfield). Refences to missed approach procedure (Mayfield). Refences to routes and levels to use when leaving the zone or holding area (Mayfield).										
	EGKK AD 2.22.4 Holding: References to holding (WILLO, TIMBA and MAY).										
	EGKK AD 2.22.11 Procedures for outbound aircraft: References to alternative SID Availability (MIMFO, FRANE, LAM). References to holding (LUMBA, MAY, MID).		Textual references to SIDs that form part of the AIP will be updated following updates made to the charts/procedures (see sections above for proposed mitigations)								

7.1.1 GNSS Outages

Many of the options discussed remove EGKK's reliance on conventional ground-based navigation. Subsequently, there could be concerns about EGKK's resilience in the event of a GNSS outage.

In the event of a GNSS outage, regardless of conventional instrument procedure availability, is it expected that aircraft would no longer operate other than those aircraft already airborne prior to the outage. Due to operators' dependency on satellite-based navigations systems, it is not expected that any aircraft would depart during an outage and we would expect airborne aircraft to be vectored before joining a conventional Instrument Approach Procedure to land.

As this scenario is expected to impact all airports that are affected by NAVAID rationalisation, we recommend that NERL undertakes engagement with airlines to confirm what would happen in the event of a GNSS outage and understand any contingency plans they may already have in place in the event of a GNSS outage

8 Conclusion

A team formed of representatives from Gatwick Airport, ATM specialists, and representatives of Gatwick ATC have reviewed the Impact Assessment and the options available as outlined in this document. Following consideration of the benefits, impacts and risks of all available options, and given that Gatwick is in the process of undertaking an ACP driven by wider airspace modernisation, the preferred option(s) are outlined below.

Preferred option

HARDY 5M 5V:	Withdraw the procedure (would require a Level 0 ACP)
SIDs and IAPs w/o radar:	RNAV Substitution for all SIDs and IAPs without radar control. In order to take forward this option, Gatwick would be required to follow the CAP1781 Guidance for the use of RNAV Substitution and CAP1781b DVOR / DME /NDB Rationalisation: Example Safety Approach. It is anticipated that, following CAP1781 guidance, a Level 2C Airspace Change would be required to implement this option. RNAV substitution is considered a suitable option as it enables all VOR withdrawals to be mitigated as part of one ACP. The scaling of a Level 2C ACP, and the time / expense is proportionate for a mitigation measure. It may be feasible to withdraw the conventional SIDs from just the southern runway excluding Route 4 SIDs. This may be considered by GAL subject to a successful application for RNAV substitution.
SRAs:	Withdrawn via a Level 0 ACP
VRP:	Referenced by other means as part of the CAA process
IAPs:	5 Year review[1] to remove reference to RCF procedures on IAP charts and add procedures to AD2.22 and upgrade the RNP APCH Conventional Missed Approaches to RNP Missed Approaches.

8.1 Next Steps

As per the process outlined within the CAP1781 guidance, Gatwick are submitting this Impact Assessment to the CAA for review and acceptance. Following review and acceptance by the CAA, if in agreement, Gatwick will move onto the next steps in the process which is to submit Statement of Need(s), and to gather the necessary evidence items in support of a request to the CAA for approval.

[1] The CAA have confirmed these actions can be actioned as part of Gatwick's 5-year review and remain outside of the CAP1616 process.

9 Appendix A: Full AIP Impact Assessment (March 2021)

This appendix shows the full textual details of the AIP and highlights in red where there is an impact due to NAVAID rationalisation. (Please note that the yellow highlighting is due to the AIP formatting, and does not form part of this assessment).

9.1.1 EGKK — LONDON GATWICK

9.1.1.1 EGKK AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGKK — LONDON GATWICK

9.1.1.2 EGKK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 510853N Long: 0001125W Mid point of Runway 08R/26L.
2	Direction and distance from city	2.7 NM N of Crawley. 24.7 NM S of London.
3	Elevation / Reference temperature / Mean Low Temperature	203 FT / 20 °C / -
4	Geoid undulation at AD ELEV PSN	149 FT
5	Magnetic Variation / Annual Change	0.53°E (2022) / 0.19°E
6	AD Administration Address Telephone Telefax	GATWICK AIRPORT LIMITED. London (Gatwick) Airport, West Sussex RH6 0NP 0844-892 0322 (Gatwick Airport Ltd) 01293-601031 (ATC) 01293-503203 (Gatwick Airport Ltd)

7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Telephone calls to ATC operational areas may be recorded.

9.1.1.3 EGKK AD 2.3 OPERATIONAL HOURS

1	AD Administration	H24
2	Customs and immigration	H24
3	Health and sanitation	
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	ATS	H24
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-icing	H24
12	Remarks	Refer to AD 2.20 item 1.

9.1.1.4 EGKK AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	Full. Nearest railway siding: Crawley New Yard, approx 1 NM.
2	Fuel and oil types	AVTUR JET A-1 Skydroll 500B, W80, W100, AFTO 100, 390, 555, 750
3	Fuelling facilities/capacity	Hydrant refuelling. Very limited bowser capacity.
4	De-icing facilities	By arrangement with handling agent.
5	Hangar space for visiting aircraft	Yes. By arrangement with local companies.
6	Repair facilities for visiting aircraft	Maintenance and repair by arrangement with local operators.
7	Remarks	Oxygen and related servicing by arrangement with local companies. Operators are to make prior arrangements with one of the handling agents for ground handling of all flights.)

9.1.1.5 EGKK AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels linked to the north and south terminals.
2	Restaurants	Restaurant, buffet and bar.
3	Transportation	Trains, coaches, buses, taxis and hire cars. Nearest railway station, Gatwick Airport (South Terminal).
4	Medical facilities	Limited first aid treatment and nursing staff available.
5	Bank and Post Office	
6	Tourist Office	

7	Remarks	

9.1.1.6 EGKK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting services	RFF Category A10
2	Rescue equipment	High access vehicle.
3	Capability for removal of disabled aircraft	Airlines must have a confirmed contract for aircraft recovery. Aircraft recovery arrangements must be submitted to Gatwick Airport Ltd.
4	Remarks	

9.1.1.7 EGKK AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical, Chemical de-icing, Gritting.
2	Clearance priorities	Standard. See AD 1.2.2.
3	Remarks	Under certain circumstances during adverse weather the Airport Disruption Cell may be established.

9.1.1.8 EGKK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS D ATA

1	Apron surface and strength	PARKING STANDS Surface: Concrete and Concrete Block Paving. PCN: Concrete 89/R/C/W/T and Concrete Block Paving 100/F/C/W/T
2	Taxiway width, surface and strength	Taxiway TANGO: 23 M Surface: Concrete and asphalt PCN 55/R/C/W/T Taxiway TAXIWAYS 1: 23 M Surface: Concrete PCN 89/R/C/W/T

		Taxiway TAXIWAYS 2: 23 M Surface: Asphalt PCN 100/F/C/W/T Taxiway UNIFORM: 25 M Surface: Concrete PCN 89/R/C/W/T Taxiway VICTOR: 23 M Surface: Concrete PCN 59/R/D/W/T Taxiway WHISKEY: 23 M Surface: Concrete PCN 59/R/D/W/T Taxiway YANKEE: 23 M Surface: Concrete and asphalt PCN 55/R/C/W/T
3	Altimeter checkpoint location and elevation	Apron 192 FT
4	VOR checkpoints	
5	INS checkpoints	See Aircraft Ground Movement/Parking/Docking Chart.
6	Remarks	

9.1.1.9 EGKK AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Azimuth and Stopping guidance is provided by 'Safedock' – Advanced Visual Docking Guidance System (A-VDGS) except as follows: Marshaller Stands: 33R, 130-136, 150L/R, 152L/R, 559. Safedock/Mirror Stands: 551-553. With the exception of stands 41 and 43, all stands are designed for nose-in/push back operations. Aircrew are to note that all SEG systems are activated by their ground handling agent. The activation of SEG systems should indicate

		that a safety check of the stand has been made by the handling agent prior to the aircraft arrival. Pilots must not enter an aircraft stand unless the SEG is activated and the correct aircraft type is displayed, or a Gatwick Airport Limited marshaller has signalled clearance to proceed. In the event of there being no activated SEG displayed upon approach to the stand, flight crews must hold position on the taxiway and advise GMC of the non-activation of the SEG. Aircrew must not attempt to self park if the SEG is not activated.
2	Runway and taxiway markings and lighting	Runway marking aid(s): 08L/26R: Full ICAO runway designation, runway threshold aiming point and runway centre-line markings. Lead-offs from Runway 08L/26R are marked by a continuous yellow line from the centre of the runway. 08R/26L: Full ICAO runway designation, runway threshold, aiming point, touch-down zone and runway centre-line markings. Lead-offs from the runway are marked by a continuous yellow line from the centreline of the runway. Runway light(s): 08L/26R: Threshold - HI green lights. Edge - HI white lights. Stop end - HI red lights. Runway threshold identification lights - 2 synchronised flashing white lights, one at each end of the THR bar. 08R/26L: Threshold - HI green lights. Edge - HI white lights. Centre-line - HI colour coded white/red lights. TDZ - HI white lights. Stop end - HI red lights. Colour coded amber/green lights indicate the runway turn-off routes to the CAT III stop bars. 26L: Starter Extension - Blue edge lights. Taxiway marking aid(s): Yellow painted centreline. Taxiway light(s): Taxiway Unavailable Bars (TUBS) comprising of a line of red stop lights spaced

		at approximately 3 M centres across the full width of the mouth of each RET/RAT adjacent to Runway 08R/26L and running parallel to the runway centre-line.
3	Stop bars and runway guard lights (if any)	Illuminated red stop bars are provided where appropriate. Stop bars at runway holding points are in operation H24.
4	Other runway protection measures	
5	Remarks	The apron is marked for nose-in parking only and operators should ensure that agents can supply tractor push-back facilities. ILS localizer Sensitive Area: Colour coded alternate amber and green lights are installed at all exits from Runway 08R/26L to denote the extent of the localizer sensitive area. 2 illuminated wind direction indicators.

9.1.1.10 EGKK AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
08L/TAKE-OFF	CRANE	510922N 0000937W	297 FT	110 FT	Yes Steady Red	Situated at South Terminal Railway Station
(EGKK3244) 26R/APPROACH	BUILDING AERIAL	510920.70N 0000944.60W	326 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK3206) 08L/TAKE-OFF	BUILDING CHIMNEY	510919.93N 0000932.98W	268 FT		No	
(EGKK3254) 08L/TAKE-OFF	BUILDING	510917.97N 0000946.60W	276 FT		No	
(EGKK3210) 08L/TAKE-OFF	BUILDING	510915.69N 0000944.72W	241 FT		No	
(EGKK3435) 08L/TAKE-OFF	AIRCRAFT ON STAND	510914.37N 0000951.76W	231 FT		No	
(EGKK3314) 08R/TAKE-OFF	TREE	510904.35N 0000928.48W	253 FT		No	
(EGKK1140) 08R/TAKE-OFF	AERIAL	510903.80N 0000946.08W	214 FT		No	
(EGKK4988) 26L/TAKE-OFF	TREE	510855.43N 0001419.77W	362 FT		No	
(EGKK4989) 26L/TAKE-OFF	TREE	510854.58N 0001419.34W	371 FT		No	
(EGKK4990) 26L/TAKE-OFF	TREE	510853.66N 0001419.18W	355 FT		No	
(EGKK2307) 26L/TAKE-OFF	TREE	510853.58N 0001324.80W	259 FT		No	
(EGKK3689) 26L/TAKE-OFF	UTILITY POLE	510853.13N 0001306.70W	233 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK2233) 26L/TAKE-OFF	TREE	510852.93N 0001256.70W	247 FT		No	
(EGKK3745) 26L/TAKE-OFF	TOP OF BANK	510852.76N 0001253.10W	224 FT		No	
(EGKK2197) 26R/TAKE-OFF	OBS LIGHT	510852.55N 0001253.72W	228 FT		Yes Red	
(EGKK2419) 26L/TAKE-OFF	TREE	510850.08N 0001428.09W	380 FT		No	
(EGKK3754) 26R/TAKE-OFF	TOP OF BANK	510849.33N 0001254.32W	227 FT		No	
(EGKK2242) 26R/TAKE-OFF	TREE	510849.03N 0001256.44W	233 FT		No	
(EGKK4994) 26L/TAKE-OFF	TREE	510848.33N 0001418.86W	353 FT		No	
(EGKK4494) 26R/TAKE-OFF	TREE	510848.26N 0001331.68W	283 FT		No	
(EGKK4495) 26L/TAKE-OFF	TREE	510848.16N 0001330.82W	280 FT		No	
(EGKK4993) 26L/R/TAKE-OFF	TREE	510847.83N 0001421.88W	371 FT		No	
(EGKK4992) 26L/R/TAKE-OFF	TREE	510847.16N 0001425.29W	382 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK3658) 26L/R/TAKE-OFF	TREE	510846.68N 0001425.14W	381 FT		No	
(EGKK4991) 26L/R/TAKE-OFF	TREE	510846.23N 0001428.56W	382 FT		No	
(EGKK4983) 26L/R/TAKE-OFF	TREE	510845.95N 0001440.75W	391 FT		No	
(EGKK3652) 26L/R/TAKE-OFF	TREE	510845.92N 0001430.68W	385 FT		No	
(EGKK2425) 26L/TAKE-OFF	TREE	510845.36N 0001431.30W	369 FT		No	
(EGKK3644) 26L/TAKE-OFF	TREE	510844.61N 0001436.63W	395 FT		No	
(EGKK2372) 26R/TAKE-OFF	TREE	510843.96N 0001438.19W	400 FT		No	
(EGKK3651) 08R/APPROACH 26R/TAKE-OFF	TREE	510843.58N 0001400.05W	313 FT		No	
(EGKK3640) 08R/08L/APPROACH 26R/TAKE-OFF	TREE	510843.53N 0001437.79W	394 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK4980) 26L/TAKE-OFF	TREE	510843.26N 0001440.20W	394 FT		No	
(EGKK3638) 26L/TAKE-OFF	TREE	510842.91N 0001436.61W	384 FT		No	
(EGKK2376) 26L/TAKE-OFF	TREE	510842.46N 0001437.16W	384 FT		No	
(EGKK4971) 08R/08L/APPROACH 26R/TAKE-OFF	TREE	510839.43N 0001459.90W	440 FT		No	
(EGKK4802) 08R/APPROACH	TREE	510838.22N 0001513.48W	434 FT		No	
(EGKK4832) 08R/APPROACH 26R/TAKE-OFF	TREE	510837.59N 0001455.13W	408 FT		No	
(EGKK2131) 26L/TAKE-OFF	TREE	510836.50N 0001251.11W	227 FT		No	
(EGKK2130) 26L/TAKE-OFF	TREE	510835.65N 0001251.55W	234 FT		No	
(EGKK4977) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510832.69N 0001435.45W	378 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK3573) 26R/26L/TAKE-OFF	TREE	510831.75N 0001355.38W	310 FT		No	
(EGKK4683) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510831.04N 0001451.68W	393 FT		No	
(EGKK4688) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510826.37N 0001455.43W	394 FT		No	
(EGKK2406) 08R/APPROACH	TREE	510826.02N 0001328.03W	300 FT		No	
(EGKK4726) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510825.48N 0001522.72W	432 FT		No	
(EGKK2493) 26L/TAKE-OFF	TREE	510824.50N 0001328.28W	302 FT		No	
(EGKK2395) 26R/26L/TAKE-OFF	TREE	510824.20N 0001530.26W	443 FT		No	
(EGKK4837) 26R/TAKE-OFF	TREE	510810.72N 0001609.64W	465 FT		No	
(EGKK4808) 26R/26L/TAKE-OFF	TREE	510808.80N 0001600.96W	478 FT		No	

In Approach/Take-off areas						
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGKK4776) 26L/TAKE-OFF	TREE	510802.16N 0001557.35W	479 FT		No	

In circling area and at aerodrome					
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**	**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**
(EGKK5650)	TREE	511037.52N 0001339.22W	403 FT	No	
(EGKK5116)	TREE	511035.90N 0002219.71W	1027 FT	No	
(EGKK5098)	TOWER FLAGPOLE	511034.88N 0002216.72W	1027 FT	No	
(EGKK5377)	TREE	511001.73N 0001424.27W	449 FT	No	
(EGKK2372) 26R/TAKE-OFF	TREE	510843.96N 0001438.19W	400 FT	No	
(EGKK3640) 08R/08L/APPROACH 26R/TAKE-OFF	TREE	510843.53N 0001437.79W	394 FT	No	
(EGKK4971) 08R/08L/APPROACH 26R/TAKE-OFF	TREE	510839.43N 0001459.90W	440 FT	No	

In circling area and at aerodrome					
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**	**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**
(EGKK4802) 08R/APPROACH	TREE	510838.22N 0001513.48W	434 FT	No	
(EGKK4832) 08R/APPROACH 26R/TAKE-OFF	TREE	510837.59N 0001455.13W	408 FT	No	
(EGKK4977) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510832.69N 0001435.45W	378 FT	No	
(EGKK4683) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510831.04N 0001451.68W	393 FT	No	
(EGKK4688) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510826.37N 0001455.43W	394 FT	No	
(EGKK4726) 08R/APPROACH 26R/26L/TAKE-OFF	TREE	510825.48N 0001522.72W	432 FT	No	
(EGKK2395) 26R/26L/TAKE-OFF	TREE	510824.20N 0001530.26W	443 FT	No	
(EGKK4837) 26R/TAKE-OFF	TREE	510810.72N 0001609.64W	465 FT	No	
(EGKK4808) 26R/26L/TAKE-OFF	TREE	510808.80N 0001600.96W	478 FT	No	
(EGKK4776) 26L/TAKE-OFF	TREE	510802.16N 0001557.35W	479 FT	No	

In circling area and at aerodrome					
Obstacle ID/ Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**	**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**
(EGKK4554)	MAST	510759.50N 0001 410.18W	419 FT	No	
(EGKK4217)	MAST	510659.06N 0001 055.20W	385 FT	No	
(EGKK4243)	MAST	510630.42N 0001 246.13W	408 FT	No	

9.1.1.11 EGKK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE HEATHROW
2	Hours of service MET Office outside hour	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE HEATHROW 30 hours
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/telephone.
6	Flight documentation Language(s) used	Charts abbreviated plain language text.TAFs/METARs. English.
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	

9	ATS units provided with information	LONDON GATWICK
10	Additional information (limitation of service, etc.)	26R TDZ IRVR is 470 M downwind of the threshold.

9.1.1.12 EGKK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY	Slope of RWY/ SWY
1	2	3	4	5	6	7
08L	077.63°	2565 x 45 M	RWY surface: Asphalt, Grooved PCN 100/F/C/W/T	510851.04N 0001229.17W 149 FT	THR 194.75 FT	RWY08L0.04% downn RWY26R0.04% up
26R	257.	2565 x 45 M	RWY surface: Asphalt, Grooved	510903.69N 0001057.40W 149 FT	THR 194.78 FT	RWY0

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY	Slope of RWY/ SWY
1	2	3	4	5	6	7
	65°		PCN 100/F/C/W/T			8L0.04%downRWY26R0.04%up
08R	077.63°	3316 x 45 M	RWY surface: Asphalt, Grooved PCN 100/F/C/W/T SWY surface: Asphalt, Grooved PCN 100/F/C/W/T	510845.12N 0001224.52W 149 FT	THR 196.26 FT	RWY08R0.06%downRWY

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY	Slope of RWY/ SWY
1	2	3	4	5	6	7
						26L 0.06% up
26L	257.65°	3316 x 45 M	RWY surface: Asphalt, Groove d PCN 100/F/C/W/T SWY surface: Asphalt, Groove d PCN 100/F/C/W/T	510902.42N 0001019.00W 149 FT	THR 195.85 FT	RWY08R 0.06% down RWY26L 0.06% up

SWY Dimensions	Clearway Dimensions	Strip Dimensions	RESA Dimensions, Overshoot / Undershoot	Location/description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
	479 x - M	2685 x 150 M				RWY 08L Landing threshold displaced by 321 M. Paved shoulders extend 7.5 M beyond each side of Runway 08L/26R. A maximum weight limit of 562,000 KG applies to landings and take-offs on Runways 08R/26L and

SWY Dimensions	Clearway Dimensions	Strip Dimensions	RESA Dimensions, Overshoot / Undershoot	Location/description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
						08L/26R.
	142 x - M	2685 x 150 M				RWY 26R Landing threshold displaced by 415 M. Paved shoulders extend 7.5 M beyond each side of Runway 08L/26R. A maximum weight limit of 562,000 KG applies to landings and take-offs on Runways 08R/26

SWY Dimensions	Clearway Dimensions	Strip Dimensions	RESA Dimensions, Overshoot / Undershoot	Location/description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
						L and 08L/26 R.
74 x 45 M	152 x - M	3436 x 280 M				RWY 08R Landing threshold displaced 395 M. Paved shoulders extend 15 M beyond each side of Runway 08R/26 L. A maximum weight limit of 562,000 KG applies to landings and take-offs on Runways

SWY Dimensions	Clearway Dimensions	Strip Dimensions	RESA Dimensions, Overshoot / Undershoot	Location/description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
						08R/26L and 08L/26R.
61 x 45 M	144 x - M	3436 x 280 M				RWY 26L Landing threshold displaced by 425 M. 150 M starter extension. Paved shoulders extend 15 M beyond each side of Runway 08R/26L. A maximum weight limit of 562,000 KG applies to

SWY Dimensions	Clearway Dimensions	Strip Dimensions	RESA Dimensions, Overshoot / Undershoot	Location/description of arresting system	OFZ	Remarks
8	9	10	11	12	13	14
						landings and take-offs on Runways 08R/26L and 08L/26R.

9.1.1.13 EGKK AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
08R	3159 M	3311 M	3233 M	2765 M	
26L	3255 M	3399 M	3317 M	2830 M	
08R	2931 M	3083 M	3005 M		Take-off from intersection with Hold Hotel 1.
08R	2782 M	2934 M	2856 M		Take-off from intersection with Hold Golf 1.
26L	3142 M	3286 M	3203 M		Take-off from intersection with Hold Alpha 1.
26L	2897 M	3041 M	2958 M		Take-off from intersection with Hold Bravo 1.

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
26L	2464 M	2608 M	2525 M		Take-off from intersection with Hold Charlie 1.
08L	2561 M	3040 M	2561 M	2241 M	
26R	2515 M	2657 M	2515 M	2146 M	

9.1.1.14 EGKK AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
08L	Centre-line with one crossbar. 420 M Light intensity high	Green Light intensity high With green wingbars. Runway thre	PAPI/3°65 FT450M			HI flush bi-directional 60 M spacing, with LIom	Red		

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
		should identification lights - 2 synchronised flashing white lights, one at each end of the THR bar. Visible in the approach sector				ni-directional component			

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
		only.							
26R	Centre-line with one crossbar. 420 M Light intensity high	Green Light intensity high With green wingbars. Runway threshold identification lights - 2 synchronised flashing whit	PAPI/3°68 FT425M			Hl flush bi-directional 60 M spacing, with LIomni-directional component	Red		

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
		e lights, one at each end of the THR bar. Visible in the approach sector only.							
08R	Coded centre-line with five crossbars. Supplementary lighti	Green Light intensity high With HI green win	PAPI Right/ 3° 68	Light intensity high 893 M	Colour coded 15 M spacing Light intensity high	HI flush bi-directional 60 M spacing,	Red	74 M beyond RWY end lights Red	Approach: Rapid Exit Taxiway In

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre Linelighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
	ng inner 300 M. 914 M Light intensity high	gbars	FT430M			first 393 M from RWY end showing red to displaced landing THR			dicator Lights (RETILs) installed on the first and second Rapid Exit Taxiways (RETs)

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									for Runway 08R/26L. They provide a 3-2-1 countdown pattern of amber lights to enab

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre Linelighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									le pil ot s to lo ca te th e ne ar es t R E T an d ap pl y br ak in g ac tio n for a m or e eff ici en t rol

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									l-out and runway exit speed.
26L	Coded centre-line with five crossbars. Supplementary lighting inner 300 M. 914 M Light intensity high	Green Light intensity high With green wingbars	PAPI/3°69 FT440M	Light intensity high 893 M	Colour coded 15 M spacing Light intensity high	Hl flush bi-directional 60 M spacing, first 267 M from RWY	Red	61 M beyond RWY end lights Red	Approach: Rapid Exit Taxiway Indicator Lights (RETILs

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
						end showing red to displaced landing THR			) installed on the first and second Rapid Exit Taxiways (RETs) for Runway 08R/ 26L. Th

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									ey provide a 3-2-1 countdown pattern of amber lights to enable pilots to locate the

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre LinelightingLength/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									nearest RET and apply braking action for a more efficient roll-out and runway ex

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI/PAPI Dist from THR	TDZ,lightingLength	Runway Centre Linelighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing /Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lightingLength/Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									it speed.

9.1.1.15 EGKK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 510843.36N 0001206.75W 510856.23N 0001034.04W
3	TWY edge and centre line lighting	CL: Green centre-line lighting with selective switching on all taxiway routes except Taxiway Yankee. EDGE: Taxiway Yankee has blue edge lights.
4	Secondary power supply/switch-over time	Yes - CAT I/II/III. 1 second.
5	Remarks	Apron floodlighting. Obstacle lighting.

9.1.1.16 EGKK AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO, geoid undulation	
2	TLOF and/or FATO elevation	
3	TLOF and FATO area dimensions, surface,	

	strength, marking, lighting	
4	True BRG of FATO	
5	Declared distance available	
6	APP and FATO lighting	
7	RMK	See AD 2.20, Section 5.

9.1.1.17 EGKK AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
LONDON GATWICK CTR 511258N 0001129W - 511200N 00 00341E thence clockwise by the arc of a circle radius 10 NM centred on 510853N 0001125W to 510550 N 0000342E - 510240N 0001923W thence clockwise by the arc of a circle radius 8 NM centred on 510853N 0001125W to 511118 N 0002332W - 511258N 0001129W	Upper limit: 2500 FT AL T Lower limit: SFC	D	GATWICK DIRECTOR English	6000 FT		See EGKR AD 2.22, Section (3) f

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
						ordetailsofRedhillLocalFlyingArea.
LONDON GATWICK ATZ A circle, 2.5 NM radius, centred at 510853N 0001125W on longest notified runway (08R/26L)	Upper limit: 2000 FT Lower limit: SFC	D	GATWICK DIRECT	6000 FT		SeeEGKRAD2

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
			OR English			.22, Section (3) for details of Redhill Local Flying

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
						Area.

9.1.1.18 EGKK AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	SATVOICE number(s)	Logon Address	Hours of Operation	Remarks
1	2	3	4	5	6	7
APP	GATWICK DIRECTOR	118.950 MHz When instructed by ATC. DOC 25 NM/10,000 FT.			H24	ATZ hours coincident with Approach hours.
		121.500 MHz Emergency frequency O/R.			H24	
		126.825 MHz DOC 45 NM/24,500 FT.			H24	
		129.025 MHz When instructed by ATC. DOC 45 NM/24,500 FT.			H24	

Service Designation	Callsign	Channel(s)	SATVOICE number(s)	Logon Address	Hours of Operation	Remarks
1	2	3	4	5	6	7
TWR	GATWICK DELIVERY	121.955 MHz Ground Movement Planning. Departing aircraft are to make initial call to 'Gatwick Delivery' on this frequency during hours of operation. At other times call 'Gatwick Ground'. DOC 5 NM/GND.			0630-2100 (0500-2100) or as directed.	
	GATWICK GROUND	121.805 MHz Ground Movement Control. DOC 5 NM/GND.			0530-2300 (0400-2300)	
	GATWICK TOWER	121.500 MHz Emergency frequency O/R.			H24	
		124.230 MHz DOC 25 NM/10,000 FT.			H24	

Service Designation	Callsign	Channel(s)	SATVOICE number(s)	Logon Address	Hours of Operation	Remarks
1	2	3	4	5	6	7
		134.230 MHz When instructed by ATC. DOC 45 NM/15,000 FT.			H24	
ATIS	GATWICK INFORMATION	136.525 MHz DOC 60 NM/20,000 FT.			H24	
OTHER	GATWICK FIRE	121.600 MHz Non-ATS Frequency			Available when Fire vehicle attending aircraft on the ground in an emergency.	

9.1.1.19 EGKK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/LLZ III 0.54°E (2022)	IGG	110.900 MHz	HO	510906.95N 0000946.07W		(RWY 08R)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/GP	IGG	330.800 MHz	HO	510842.61N 0001207.56W		3° ILS Ref Datum Hgt 51 FT.
ILS/LLZ III 0.53°E (2022)	IWW	110.900 MHz	HO	510841.14N 0001253.32W		(RWY 26L)
ILS/GP	IWW	330.800 MHz	HO	510855.49N 0001032.98W		3° ILS Ref Datum Hgt 51 FT.
VOR/DME 0.43°E (2022) 0.00°E (2018)	OCK	100X 115.300 MHz	H24	511818.17N 0002649.86W	200 FT	VOR DOC: 25 NM/25,000 FT and 35 NM/25,000 FT in the sector 115º to 290º. DME DOC: 70 NM/25,000 FT

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						(90 NM/25,000 FT in Sector R060°-090°).
VOR/DME 1.04°E (2022) 0.10°E (2018)	DVR	96Y 114.950 MHz	H24	510945.44N 0012132.72E	315 FT	VOR DOC: 60 NM/50000 FT.
VOR/DME 0.16°E (2022) 0.90°W (2018)	SAM	80Y 113.350 MHz	H24 Hours of operation for aerodrome purposes: HO	505718.90N 0012042.20W	64.08 FT	VOR/DME DOC: 100 NM/50,000 FT (150 NM/50,000 FT in Sector R226-316). On R204 VOR flag alarms and DME unlocks may be

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						experienced at ranges exceeding 30 NM below 8,000 FT.
VOR/DME 0.37°E (2022) 0.00°E (2018)	GWC	94Y 114.750 MHz	H24	505118.78N 0004524.25W	113 FT	VOR DOC: 20 NM/50,000 FT and 55 NM/50,000 FT in the sector 305º to 135º. DME DOC: 80 NM/50,000 FT. Due to terrain, coverage at low level

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						is reduced in Sector R300°-045°.
DME	IGG	46X 110.900 MHz	HO	510849.97N 0001120.43W	212.44 FT	(RWY 08R) On AD. DME freq paired with ILS I-GG and I-WW. Zero range is indicated at THR of Runway 08R and 26L.
DME	IWW	46X 110.900 MHz	HO	510849.97N 0001120.43W	212.44 FT	(RWY 26L) On AD. DME freq paired with

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						ILS I-GG and I-WW. Zero range is indicated at THR of Runway 08R and 26L.
VOR/DME 0.59°E (2022) 0.40°W (2015)	BIG	98X 115.100 MHz	H24	511951.15N 0000205.32E	589 FT	VOR/DME DOC: 60 NM/50000 FT (125 NM/50000 FT in Sector R285-045 and 100 NM/50000 FT in Sector R045-135). Due to

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						terrain, coverage at low level is reduced in Sector R115-220. In addition DME unlocks may occur in Sector R005-040 at ranges up to 25 NM.
VOR/DME 0.61°E (2022) 0.20°W (2016)	LAM	103X 115.600 MHz	H24	513845.69N 0000906.13E	200 FT	VOR/DME DOC: 40 NM/50000 FT (110 NM/50000 FT in

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						Sector R315-135).
VOR/DME 0.78°E (2022) 0.20°E (2018)	DET	120X 117.300 MHz	H24	511814.41N 0003550.19E	645 FT	VOR/DME DOC: 60 NM/50000 FT.
VOR/DME 0.40°E (2022) 0.30°E (2020)	MID	87X 114.000 MHz	H24	510314.23N 0003730.01W	200 FT	VOR/DME DOC: 60 NM/50,000 FT (100 NM/50,000 FT in Sector R241-001).
VOR/DME 0.65°E (2022) 0.00°E (2018)	MAY	126X 117.900 MHz	H24	510101.86N 0000658.04E	360 FT	VOR/DME DOC: 40 NM/25000 FT (60 NM/25000 FT in Sector R105-165).

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						Due to terrain, coverage at low level is reduced in Sector R315-040.

9.1.1.20 EGKK AD 2.20 LOCAL AERODROME REGULATIONS

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9.1.1.20.1.1 1 AIRPORT REGULATIONS

a. Use governed by regulations applicable to Gatwick CTR.
b. Departing aircraft are to call Gatwick Delivery for clearance 15 minutes before start up to allow for departure data to be processed.

c. Aircraft requiring to depart from Hold Mike 1 must advise Gatwick Delivery before start up.

d. Surface wind data is available for both ends of the duty runway. Normally, only the Touchdown surface wind will be passed. Stopend surface wind information is available on request.

e. All flights operating at London Gatwick Airport are subject to prior approval of the Chief Executive Officer, Gatwick Airport Ltd, and require a slot allocated by Airport Coordination Ltd (ACL).

f. Flights for aerobatic, recreational, commemorative, charity and record breaking purposes will not be permitted to use the airport, except with the prior approval of the Chief Executive Officer.

g. Planned Diversion Procedure – Airline and other operators are advised that before selecting Gatwick as an alternate, prior arrangements for ground handling should have been agreed with one of the nominated handling agents.

h. The use of this airport for training purposes is prohibited. The deliberate simulation of engine failure is not permitted whilst on approach to or departure from the airport.

i. This Airport may be used by Executive and Private Aircraft (general aviation) subject to the following conditions:

i. Requests for ad-hoc slot allocations should be made to ACL during working hours 0830-1700 Monday to Friday by SITA: LONACXH; e-mail: lonacxh@acl-uk.org; or Tel: 0208-564 0605, Fax: 0208-564 0691, or at all other times to Stand Allocation Tel: 01293-503089 or Fax: 01293-505149 (or to their nominated handling agent who will obtain prior permission from Airport Coordination Ltd or Stand Allocation). OCS account holders can add, change and cancel slots at any time on the online coordination portal: https://www.online-coordination.com/default.aspx?AspxAutoDetectCookieSupport=1.

   Prior Permission for General Aviation operators not more than 10 days and preferably not less than 24 hours before intended movement. The following details must be notified for each flight:

   1. Aircraft type, registration and operator;
   2. Point of origin and destination;
   3. Date/time of ETA and ETD Gatwick

   Nominated handling agent. (Mandatory for both domestic and international flights).

   Due to increasing demand for runway slots, particularly at peak times of the day, General Aviation operators are advised that their requested slot time may not be available. In this case, the available runway slot times nearest to those requested will be offered by Airport Co-ordination Ltd. It is emphasised that runway slots are required for both arrivals at and departures from Gatwick. No runway slot is valid unless identified by a reference number in the form of a letter and five digits. The filing of a flight plan does not confer permission to use Gatwick Airport. Runway slots are required in addition to ATC slots. ATC clearance to approach/land or Taxi/take-off does not imply the existence of a valid runway slot.

ii. General Aviation Terminal opening hours are: 0500-2300 (0400-2200). Hours by appointment only: 2300-0500 (2200-0400).

iii. All international passengers arriving on private and executive aircraft requiring HM Customs clearance, must proceed with their handling agent to the South Terminal.

iv. All commanders of private and executive aircraft arriving or departing on an international flight must obtain HM Customs clearance via their handling agent from the Customs Report Office in Atlantic House.

v. General Aviation Terminal – Meteorological Information
There are no comprehensive meteorological facilities at the General Aviation Terminal. Pilots requiring meteorological information must either self-brief at FBU in Atlantic House or arrange for their Handling Agent to collect the information on their behalf.

j. Fixed-wing and rotary aircraft using London Gatwick Airport do so in accordance with the Gatwick Conditions of Use document. A copy of the document is available on the London Gatwick Airport website: www.gatwickairport.com

k. Nothing in this procedure shall, however, prevent an aircraft that has declared an emergency from landing.

l. Fixed Electrical Ground Power must be used when available and serviceable. Use of aircraft Auxiliary Power Units (APUs) and Ground Power Units (GPUs) are strictly controlled to minimise environmental impact. APUs must be shut down after arrival and only restarted before departure according to the timescales described in detail in published Gatwick Airport Directives and Notices, a summary of which is detailed below. Regular audits take place to ensure compliance with the regulations. Dispensation to use GPUs must be requested from GAL Airside Operations Tel: +44(0)1293 503090.

	APU may be started before Scheduled Off Blocks Time (SOBT)	**APU must be shutdown after arrival on stand within**
Narrow Body Aircraft (Code A, B & C)	No more than 15 minutes prior to SOBT.	10 minutes
Wide Body Aircraft (Code D, E & F)	No more than 50 minutes prior to SOBT**Or** not more than 90 mins prior to SOBT when the FEGP has not been upgraded to provide enough power to support the FMS.	10 minutes

m. † Exceptions to these restrictions are:

n. Note 1: When an aircraft is scheduled to be towed off to another location the APU may be restarted for safety reasons not in excess of 10 minutes prior to the planned movement.

o. Note 2: When the planned towing movement as specified under 1 is delayed due ATC, then the APU may be left running.

p. Note 3: When the external air temperature is below 5°C or above 25°C as stated on the ATIS, then the APU restriction for Narrow body aircraft is extended to 40 minutes before SOBT.

q. Note 4: When the external air temperature is below 5°C or above 25°C as stated on the ATIS, then the APU restriction for Wide body aircraft is extended to 75 minutes before SOBT.

r. Note 5: At certain times of the year during periods of extreme high temperatures, further exemptions may be requested from GAL Airside Operations in accordance with Gatwick Airport Directives and Notices.

9.1.1.20.1.2 2 GROUND MOVEMENT

a. General

i. Ground Movement Control (GMC) is in continuous operation and all surface movement of aircraft, vehicles and personnel on the Manoeuvring Area is subject to ATC authority.

ii. Directions issued by ATC should be followed specifically. RTF transmissions must be brief, concise and kept to the minimum number.

iii. Within the Manoeuvring Area, pilots will be cleared to proceed under general direction from GMC and they are reminded of the extreme importance of maintaining a careful lookout at all times. ATC instructions will normally specify the taxi route to be followed. Pilots routing East bound on Taxiway Juliet should exercise caution at the junctions of Taxiways Papa and November, as the Taxiway deviates to the North.

iv. Departing aircraft on first contact with Gatwick ATC must state aircraft type, stand number and the code letter of the latest ATIS received and maintain a listening watch on the appropriate frequency.

v. **It is the aircraft Commander's responsibility not to accept an ATC clearance into an area not approved for his type of aircraft.**

vi. Pilots of departing aircraft are reminded to contact Gatwick Delivery for clearance 15 minutes before start up to allow for departure data to be processed.

vii. Pre-departure clearance by datalink is available at Gatwick for suitably equipped aircraft. Pilots requesting pre-departure clearance by datalink must when entering stand number ensure that:

1. L/M/R stand designator as appropriate is entered (i.e. 141L, 562M, 34R);
2. Ensure stand number is entered with at least 2 figures (ie 05M).

viii. Taxiway Mike is available as an entry point to Runway 26L. Taxiway Mike can not be used as an exit point from Runway 08R.

ix. Flight crew are reminded of the extreme importance of maintaining a careful lookout at all times and are at all times responsible for wing tip clearance. The taxiway lighting system is an aid to pilots when operating on the manoeuvring area during darkness or in poor visibility. Notwithstanding the taxiway lighting system, pilots continue to remain responsible for wing tip clearance.

b. Gatwick Airport is equipped with an advanced surface movement radar utilising Mode-S.

i. Aircraft operators intending to use London Gatwick Airport should ensure that Mode-S transponders are able to operate when the aircraft is on the ground.

ii. Flight crew should select XPNDR or the equivalent according to specific installation, AUTO if available, not OFF or STDBY, and the assigned Mode-A code

1. From the request for push back or taxi, whichever is earlier;
2. After landing, continuously until the aircraft is fully parked on stand.

iii. After parking the Mode-A code 2000 must be set before selecting OFF or STDBY.

iv. Flight crew of aircraft equipped with Mode-S having an aircraft identification feature should also set the aircraft identification. This setting is the aircraft identification specified in Item 7 of the ICAO ATC Flight Plan. The aircraft identification should be entered from the request for pushback or taxi, whichever is earlier, through the FMS or the Transponder Control Panel.

c. Aprons

i. Before the Aircraft Commander calls for pushback they must ensure that the tug driver is in the tug, ready to push. **If ATC issue a non-standard or conditional pushback clearance, ATC must be advised if the Aircraft Commander is not in two-way headset communication with the tug crew.** The tug driver must listen to the exchange between the aircraft crew and ATC so that the tug crew have a full understanding of the detail of the ATC approval. If the tug driver has not heard the pushback instruction they must not push the aircraft. Request and clearance will be issued between the flight crew and ATC only. On receipt of pushback instruction, the flight crew shall report the instruction verbatim to the ground crew. Any clarification required from the tug driver shall, in the first instance, be directed to the flight crew. If further clarity is required then the tug driver should contact ATC.

ii. The Manoeuvring Area is equipped with the following forms of taxiway guidance:

1. Yellow painted taxiway centre-lines;
2. Yellow painted holding position lines at the approach to runways;
3. Green taxiway centre-line lights and red stop bars controlled from the Tower;
4. An illuminated red stop bar means **STOP.** Aircraft must not proceed until the stop bar is extinguished or ATC permission is received;
5. Runway Guard Lights are installed at all runway/taxiway intersections, comprising alternating flashing amber standard low level dual traffic lights, operating H24;
6. Taxiway Unavailable Bars (TUBS) comprising of a line of red stop lights spaced at approximately 3 M centres across the full width of the mouth of each RET/RAT adjacent to the runway and running parallel to the runway centre-line. TUBS are installed at Alpha, Bravo, Bravo Romeo, Charlie, Charlie Romeo, Delta, Echo, Foxtrot Romeo, Golf, Golf Romeo, Hotel and Juliet, to prevent incursions onto taxiways which are unavailable due to operational issues such as Work in Progress.

iii. Pilots are to use the minimum power necessary when manoeuvring on the taxiway system. This is of particular importance when manoeuvring in apron cul-de-sacs, where jet blast can affect adjacent stands.

iv. Cross Bleed Starts - if informed by an aircraft that a cross bleed start is required, GMC must consider the blast effect and utilise a non-standard push back if required. Aircraft must be aligned with the taxiway centreline before commencing the cross bleed start.

v. Pilots pushing from Stands 11 and 12 are reminded not to start engines until the aircraft has been pulled forward abeam Stand 12, due to jet blast on the neighbouring airside road.

d. Ground movement of large aircraft - Code D (Wingspan between 36 M < 52 M)

i. The following restrictions apply:

1. Taxiway Alpha November (East of Taxiway Mike) is not available for code D aircraft;
2. Taxiway Juliet (East of Taxiway November) is not available for code D aircraft;
3. Taxiway Victor (East of Taxiway Whiskey) is not available for code D aircraft;
4. Taxiway Whiskey is not available for code D aircraft;
5. Taxiway Zulu between Taxiway November to Taxiway Whiskey is not available for code D aircraft.

e. Ground movement of large aircraft - Code E (Wingspan between 52 M < 65 M)

i. The following restrictions apply:

1. Taxiway Juliet, east of Taxiway November is not available for code E aircraft;
2. Taxiway Zulu is not available for code E aircraft;
3. Taxiway Lima, between Taxiways Romeo and Sierra is a code E taxilane;
4. Taxiway Lima beyond Stand 36 is not available for code E aircraft with a wingspan in excess of 61 M;
5. Taxiway Yankee from Whiskey 1 Hold to abeam the Wind Direction Indicator is not available for code E aircraft with a wingspan in excess of 61 M.

f. Ground movement of large aircraft - Code F (Wingspan between 65 M < 80 M)

i. Code F aircraft - Taxiway routes available to Code F are shown on aerodrome chart AD 2-EGKK-2-5, marked in yellow. There is a positive but substandard obstacle clearance (minimum of 47.5 M) on Taxiway Juliet Code F routing. Pilots are to ensure that Cockpit over Centre-line (COCL) technique is used at all times when manoeuvring at Gatwick.

g. Remote De-icing – Aircraft Engines Running

i. There are two identified locations (de-icer pads) to enable remote de-icing of aircraft with engines running. They are managed and coordinated by the Gatwick Airport Ltd deicing service provider for airlines which have had Risk Assessments and Method Statements signed off by Gatwick Airport Ltd. There is an agreed process in place for the operation of these pads.

ii. The two locations are uniquely identified as DA 43 and DA Sierra. Both will have resource to coordinate the operations, communication with pilots and de-ice rigs operatives and an electronic signage board for visual communications.

1. **DA 43**

Located on Stand 43 and can accommodate Code C aircraft only. The holding point for this pad is Stand 41. Aircraft will taxi to this location under ANS control.

2. **DA Sierra**

Located on Taxiway Sierra abeam Stands 170/171 and can accommodate up to B747 size aircraft. The holding point for this pad is Taxiway Lima and the north of Taxiway Sierra. Aircraft will taxi to this location under ANS control.

h. Use of Stands 41 East, 41 West, 43 East and 43 West

i. Aircraft types max size 32B can use East and West centre-lines on Stands 41 and 43.

i. Remote Holding Procedures

i. Gatwick has remote holding capacity to maintain flow of aircraft by releasing occupied stands and pushback crews. ATC will endeavour to offer remote hold to applicable flights subject to availability. Applicable flights are those with CTOT or other delays in excess of 10 minutes.

ii. Holding capacity is provided by drive-through Stands 41 and 43 (when available), including the use of the East and West centre-lines dependent on aircraft size. Eastern centre-lines are painted orange and Western centre-lines are painted blue. When entering East and West remote hold from Taxiway Lima, aircraft should enter 41 or 43 centre-line and then follow the East or West centre-line as requested by ATC.

iii. When approaching 41E from the east along Taxiway Kilo, flight crews are to use judgemental oversteer.

iv. Additionally, subject to availability and traffic loading, tactical holding may be utilised on taxiways at the discretion of the Ground Controller.

v. Tactical holding is also available on Stands 141R, 142R, 143L, 144L, 152R, 171L, 173L, 175L, 230L, 231L, 232L and 233L. Aircraft will be marshalled onto these tactical remote holding stands. Pilots must not enter the stands until a marshaller is present. Stand 152R only will require a marshaller to exit. Pilots should exit Stands 141R, 142R, 143L, 144L, 171L, 173L, 175L, 230L, 231L, 232L and 233L by turning directly towards the taxiway centre-line.

vi. Default positioning to remote hold is push and taxi, unless otherwise directed by ATC (e.g. pushback or push and tow).

j. Airport-Collaborative Decision Making (A-CDM)

i. Definitions of Commonly Used A-CDM Terms

1. **Calculated Take-Off Time (CTOT)** - Assigned by Eurocontrol's NMOC when flow restrictions are in place. Aircraft must depart within -5 to +10 minutes of its CTOT (as existing requirement).

2. **Target Off-Blocks Time (TOBT)** - The time an aircraft is expected, and agreed by Ground Handling Agent and flight deck to be ready to leave the stand (in the case of normal operations), or ready for on stand de-icing to commence (where appropriate, in the case of winter operations). This must be updated to an accuracy of +/- 5 minutes by GHA. Accurate and stable TOBTs enhance operations on the ground as they provide all airport partners with a clear picture of the intentions of aircraft on the ground.

3. **Target Start Approval Time (TSAT)** - The time provided by ATC that an aircraft can expect to receive start approval. TSAT will be displayed on Stand entry Guidance System (SEGS). Aircraft on stands with no active SEGS will have TSAT confirmed by Gatwick Delivery on initial call-up. Alternatively, TSAT can be advised by the TCO/Dispatcher. TSAT should reduce queuing times at the runway hold, while maintaining a high runway utilisation. Calculated automatically by the Departure Sequencer by taking into account TOBT, CTOT, wake vortex, SID routing, Variable Taxi Time (VTT), demand and any capacity constraints e.g. Low Visibility Procedures.

4. **Target Take-Off Time (TTOT)** - The time that an aircraft is expected to take off. TTOT is calculated by adding a VTT to the TSAT. TTOT is updated in line with any updates to the TSAT. Time is

a target – the requirement for an aircraft to be airborne within a time window only applies to flights with a CTOT.

ii. Flight Deck shall comply with the following A-CDM procedure.

1. You should ensure that your flight is ready to push at TOBT +/- 5 minutes: ground activities completed, doors closed, push-back tug connected, cockpit ready for start up.
2. Maintain regular communication with the TCO/GHA. They are responsible for updating your TOBT.
3. If you identify a delay to TOBT +5 or believe you will be ready to depart earlier than TOBT -5, notify the GHA immediately and ensure TOBT is updated before contacting ATC.

iii. At TOBT +/- 5 mins:

1. You must report to Gatwick Delivery: "[Call-sign] [stand] [QNH] ready".
2. You will either receive Start Approval or Gatwick Delivery will respond: "[Call-sign] roger".
3. You can observe your TSAT on SEGS and expect a call back from Delivery within TSAT +/- 5 mins. Aircraft on stands with no active SEGS will have TSAT confirmed on initial call-up. Alternatively, you can receive TSAT from your TCO or via Airport Community App.
4. Push-and-hold procedure will be initiated at call-up.
5. If you are ready, but are delayed by ATC, DO NOT update your TOBT.
6. If you have not reported ready for departure by TOBT +6, you will lose your TSAT and you must update your TOBT with your TCO/GHA.

iv. At TSAT +/- 5 mins:

1. Gatwick Delivery call you: "[Call-sign] information [ATIS identifier], [QNH], hold position, contact ground frequency 121.805 MHz".
2. You reply: "[Call-sign] information [ATIS identifier], [QNH], Hold position, contact ground frequency 121.805 MHz".
3. Switch to ground frequency and report: “[Call-sign] [stand]”.
4. Ground call you: “[Call-sign] [stand] push-back and start approved”.
5. You reply: “[Call-sign] push-back and start approved [push-back instruction]” .
6. In the event that you report ready with ATC and your flight is non-compliant with ACDM procedures ATC will state: “[Call-sign] You are non-ACDM compliant, contact your handling agent”. You must then contact your handling agent to resolve the issue. Do not contact ATC again until your handling agent confirms you are compliant.

v. A-CDM Process During Winter Operations

1. During freezing conditions, TSATs will be calculated by the Gatwick A-CDM system on the basis of whether the individual aircraft has been planned to de-ice on stand or on a remote de-icing pad.
2. Planned de-icing activity is fed into the Gatwick A-CDM system by GHA, who enters the intention to de-ice the aircraft. The de-icing Company allocate de-icing location (on stand or remote) and estimated start of de-icing.
3. TOBT is the time that the aircraft will be ready to be de-iced on stand or to leave the stand for remote de-icing. TOBT must NOT be

adjusted to incorporate de-icing activity as this may result in a delay to departure.

vi. On stand de-icing:

1. For on-stand de-icing, at TOBT +/-5 mins the GHA will report via A-CDM system that turn activities have been completed and the aircraft is ready (ARDT) for de-icing.
2. Once de-icing on stand is complete, pilots report to Gatwick Delivery and state: '[Call-sign] [stand] [QNH] ready to move'.
3. All further communication will be in line with standard procedures.

vii. Remote de-icing:

1. In the case of remote de-icing, at TOBT +/-5 mins pilots report to Gatwick Delivery and state: '[Call-sign] [stand] [QNH] ready to move'.
2. ATC will provide start clearance and taxi instructions to the remote de-icing pad.

9.1.1.20.1.3 3 CAT II/III OPERATIONS

a. Runways 08R and 26L, subject to serviceability of the required facilities, are suitable for Category ll and lll operations by operators whose minima have been accepted by the Civil Aviation Authority.

b. During Category ll and lll operations, Special ATC procedures (ATC Low Visibility Procedures) will be applied. Pilots will be informed when these procedures are in operation by ATIS broadcast or by RTF.

c. Departing Aircraft: ATC will require departing aircraft to use the following Category lll holding points:

- Runway 26L — Alpha 3, Charlie 3 or Mike 3;
- Runway 08R — Juliet 3, Juliet 4, Juliet 7, Hotel 3 or Golf 3.

Occasionally it may be necessary for other departure points to be used due to work in progress or at the discretion of ATC. Under these circumstances, due allowance will be made by ATC for the necessary ILS protection.

d. Arriving Aircraft: All appropriate runway exits will be illuminated, and pilots should select the first convenient exit. Ground Movement Radar (GMR) is normally available to monitor pilot 'runway vacated' reports.

- When GMR is not available to ATC, runway (LSA) vacation will be confirmed by receipt of a pilot report that the tail of the aircraft has passed the last of the alternate amber and green centre-line lights. These lights denote the extent of the ILS Localizer Sensitive Area.

e. When Low Visibility Procedures are in force a much reduced landing rate can be expected due to the requirement for increased spacing between arriving aircraft. In addition to the prevailing weather conditions, such factors as equipment serviceability may also have an effect on actual landing rates. For information and planning purposes, the approximate landing rates that can be expected are:

- RVR (M) — Expected Landing Rate
- Greater than 1000 — 24
- Between 1000 and 600 — 20
- Between 550 and 350 — 15
- Less than 300 — 12 or less

9.1.1.20.1.4 4 WARNINGS

a. In low visibility at night the apron and car park's floodlighting may be seen before approach lights on 26L and 26R approaches.
b. Except for light signals, ground signals are not displayed.
c. Pilots are warned, when landing on Runway 26L/R in strong southerly/south-westerly winds, of the possibility of building induced turbulance and windshear effects.
d. There are trees on high ground to the west, under the approach to Runways 08L and 08R. The tops are up to 287 FT AAL at ranges between 1.25 and 3 NM.
e. A hazard beacon showing a steady red light is situated on the extended centre-line of Runway 08R on tree covered high ground, 1.8 NM from 08R threshold. Trees within 0.5 NM of the beacon rise up to 85 FT above it. Another beacon, showing a steady red light, is situated 0.66 NM NNW of the first. Together, they mark the line of high ground. The beacons are switched on at night and when the high intensity approach lights are in use.
f. HT power line to the N, E and SE of airport; minimum distance 1.6 NM at 146 FT AAL rising to the S to 326 FT AAL at 4 NM. High ground to SE and S rising to 406 FT AAL is 3.5 NM from airport at its nearest point.
g. Arrivals – Due to disruption to the ILS signal during Code F operations, pilots can expect late notification of only RNP approach availability.

9.1.1.20.1.5 5 HELICOPTER OPERATIONS

a. All inbound and outbound helicopters must use the runways. Helicopter handling agents are to obtain slot allocation for all flights. Helicopters may not carry out direct approaches to or take-off from apron areas or taxiways. After landing, helicopters will ground taxi or air taxi to an allocated parking area (usually an adjacent stand). A Leader vehicle will normally be in attendance. While helicopters are operating on the manoeuvring area extreme caution must be exercised regarding wingtip clearance and turbulence.

9.1.1.20.1.6 6 USE OF RUNWAYS

a. Special runway utilisation procedures are detailed at GEN 3.8.4.
b. **Departure Wake Vortex Separations**

The following pairs of holding points for Runways 26L/08R are considered to be the same point for the purposes of departure wake vortex separation:

Runway 26L	Runway 08R
Holding points Mike 1/3 and Alpha 2/3	Holding points Juliet 1/3 and Hotel 1/3
Holding points Mike 1/3 and Bravo 1	Holding points Juliet 1/3 and Golf 1
Holding points Alpha 2/3 and Bravo 1	Holding points Hotel 1/3 and Golf 1
Holding points Bravo 1 and Charlie 1	
Holding points Bravo 1 and Yankee 1/2	

c. **Use of Runway 08L/26R**

i. Runway 08L/26R is a non-instrument runway and will only be used when Runway 08R/26L is temporarily non-operational by reason of maintenance or incident. Runway 08R/26L is closed regularly to allow maintenance to take

place. Dates and times are subject to change, latest details are advised by NOTAM and airport notices.

ii. Runway 08L/26R cannot be used simultaneously with Runway 08R/26L because of insufficient separation between the two. For this reason also, extensive safeguarding procedures are required (see d ii) before Runway 08L/26R can be activated and the runway is not available on request by pilots. Lighting for the closed runway and parallel taxiway will not be visible on approach.

d. **Restriction of Operation**

i. During Runway 08L/26R operations, delays may occur to aircraft taxiing on the aerodrome due to the following:

1. Taxiway Juliet, between Juliet 8 and Taxiway Sierra is limited to use by aircraft of wingspan of 36 M or below during actual take-offs or landings on Runway 08L/26R. Taxiway Juliet, between Taxiway Sierra and Juliet 5 is limited to use by aircraft of wingspan of 50 M or below during actual take-offs or landings on Runway 08L/26R.
2. Additional restrictions when the Ground Movement Radar (GMR) is not available.
3. Taxiway Alpha November is not available as an entry point to Runway 26R when 26R is the active runway.

ii. When Runway 08L/26R is being brought into planned use the aerodrome will be closed for a period of up to 15 minutes to allow the necessary safeguarding procedures to be implemented. The same will apply when Runway 08R/26L is brought back into use. In an emergency situation, implementation of the change to Runway 08L/26R can be expected to take substantially longer.

e. **Navaids**

When Runway 08L/26R is in use the only navigational aids available are:

i. Surveillance radar.

ii. DME.

f. **Runway and Approach Lights**

i. Runway lights will be on at all times when runway 08L/26R is in use and approach lights will be on when the runway is available for landings. It is not possible for both Runway 08R/26L and 08L/26R or for their approach lighting systems to be illuminated at the same time.

ii. The take-off distance (TODA) for runway 08L starts at the beginning of the runway, indicated by the white painted runway demarcation line marking abeam the 08L TODA sign and is where you should commence your take off roll. The 08L TODA sign is located to the right of the runway, 427 M **before** the marked runway displaced threshold.

iii. All runways at Gatwick have displaced thresholds. Crews are to ensure they are familiar with departure procedures when operating from displaced threshold runways.

iv. When the taxiway lighting system is in use during Runway 08L/26R operation, limited selective switching of green centre-line lights is available in conjunction with red GUARD BARS at runway holding points.

v. The runway holding points, in addition to red GUARD BARS, are marked by mandatory signs and amber flashing runway guard lights.

vi. Because only limited taxiway centre-line light switching is available in conjunction with the use of Runway 08L/26R, pilots must exercise extreme caution to remain on the correct taxiway route when cleared to the runway from a holding position. In certain positions, amber flashing runway guard

lights, forward of the holding positions, denote the proximity of the runway itself.

g. **Minimum Runway Occupancy Time**

i. **Departures**

1. On receipt of line-up clearance pilots should ensure that they are able to taxi and line up on the runway as soon as the preceding aircraft has commenced either its take-off roll or landing run.
2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
3. Pilots not able to comply with these requirements should notify ATC as soon as possible once transferred to the Gatwick Tower frequency.

ii. **Arrivals**

1. High Intensity Runway Operation requires all aircraft to exit the runway at the fastest speed commensurate with safety. Extended runway occupancy may result in the following aircraft being sent around.
2. Pilots should pre-plan their landing and roll out to target the rapid exit taxiways that provides for a safe and expeditious exit from runway to reduce delays and maximise utilisation at all times.

08R	**D**	**CR**	**BR**
Distance from threshold (M)	1318	1739	2194
Design Exit Speed (KT)	38	49	52
Notes: Landing aircraft are to vacate expeditiously. Arrivals are to ensure fully vacated before stopping. Traffic vacating at **CR** to await onward clearance before entering taxiway Juliet due to conflicting ground traffic. Traffic vacating at **BR** to route TWY Papa and hold before TWY Juliet to ensure tail clear of runway. Tactical requests to extend the landing roll to reduce ground taxi/exit nearer to parking stand are not to be made to ATC. Taxiway Echo is not available for vacating Runway 08R.			

26L	**E**	**FR**	**GR**
Distance from threshold (M)	1323	1773	2069
Design Exit Speed (KT)	38	52	49
Notes: Landing aircraft are to vacate expeditiously. Arrivals are to ensure fully vacated before stopping. Traffic vacating at **E** are to turn right on to Runway 08L without stopping on the runway exit. Traffic vacating **FR** and **GR** to cross Runway 26R onto Taxiway Juliet. When exiting Runway 26L aircraft do not have to call for clearance to cross Runway 26R as the runways cannot be used simultaneously. Pilots of Code F must not stop until the aircraft is established on,			

or north of, 08L/26R. Taxiway Delta is not available for vacating Runway 26L.

4. Rapid Exit Taxiway Indicator Lights (RETILs) and paint markings are provided on Runway 08R/26L to assist pilots in judging distances to Rapid Exit Taxiways and enable them to apply braking action for a more efficient roll-out and runway exit speed. RETILs are provided for exit at D and CR on 08R and E and FR on 26L.
The RETILs provide a 3-2-1 countdown pattern of amber lights together with 3 sets of painted count-down markings placed at 300 M, 200 M and 100 M from the intersection of the runway centre-line with the Rapid Exit Taxiway centre-line. Each set of markings consist of 3 white painted bars (at 300 M to go), 2 white bars (at 200 M to go) and 1 white bar (at 100 M to go). Bars are angled in the direction of the Rapid Exit Taxiway and positioned on the left hand side of the runway centre-line for 08R and the right hand side of the runway centre-line for 26L.

9.1.1.20.1.7 7 TRAINING

Not applicable

9.1.1.21 EGKK AD 2.21 NOISE ABATEMENT PROCEDURES

Notice under Section 78(1) of the Civil Aviation Act 1982

Whereas:

(1) By virtue of the Civil Aviation (Designation of Aerodromes) Order 1981 (a) Gatwick Airport – London is a designated aerodrome for the purpose of Section 78 of the Civil Aviation Act 1982 (b);

(2) the requirements specified in this notice appear to the Secretary of State to be appropriate for the purpose of limiting, or of mitigating the effect of, noise and vibration connected with the taking off or, as the case may be, landing of aircraft at Gatwick Airport – London.

Now, therefore, the Secretary of State, in exercise of the powers conferred on him by Section 78 (1) and (12) of the Civil Aviation Act 1982, by this notice published in the manner prescribed by the Civil Aviation (Notices) Regulations 1978 (c), hereby provides as follows:

1 This notice may be cited as the Gatwick Airport – London (Noise Abatement Requirements) Notice 2004 and shall come into operation on 15 April 2004.

2 The Gatwick Airport – London (Noise Abatement Requirements) Notice 2002 (d) is hereby revoked.

3 It shall be the duty of every person who is the operator of any aircraft which is to take off or land at Gatwick Airport – London to secure that, after the aircraft takes off or, as the case may be, before it lands at the aerodrome the following requirements are complied with:

1. After take-off the aircraft shall be operated in such a way that it is at a height of not less than 1000 FT AAL at 6.5 KM from start of roll as measured along the departure track of that aircraft.

2. The sites of the noise monitoring terminals relating to Gatwick Airport – London are:

Description	OS Co-ordinates	Elevation above aerodrome	Latitude	Longitude
Site 1: Russ Hill	TQ 2227 3923	54 M	*510821N	0001513W
Site 3: Orltons	TQ 2166 3878	57 M	*510807N	0001545W
Site 5: Oaklands Park Farm	TQ 2170 3939	52 M	*510827N	0001542W
Site 4: Moat House	TQ 3180 4140	4 M	510924N	0000700W
Site 6: Bellwood	TQ 3176 4177	3 M	*510936N	0000702W

3. Subject to sub-paragraphs (5) and (6) below, any aircraft shall, after take-off, be operated in such a way that it will not cause more than 94 dBA Lmax by day (from 0700 (0600) to 2300 (2200) hours) as measured at any noise monitoring terminal at any of the sites referred to in sub-paragraph (2) above.

4. Subject to sub-paragraphs (5) and (6) below, any aircraft shall, after take-off, be operated in such a way that it will not cause more than 89 dBA Lmax by night (from 2300 (2200) to 0700 (0600) hours) **and** that it will not cause more than 87 dBA Lmax during the night quota period (from 2330 (2230) to 0600 (0500) hours) as measured at any noise monitoring terminal at any of the sites referred to in sub-paragraph (2) above.

5. The limits specified in sub-paragraphs (3) and (4) above shall be adjusted in accordance with the following table in respect of any noise monitoring terminal at any of the sites referred to in the table in sub-paragraph (2) above to take account of the location of that terminal and its ground elevation relative to the aerodrome elevation.

Description	Adjustment dBA
Site 1: Russ Hill	plus 5.0
Site 3: Orltons	plus 1.9
Site 5: Oaklands Park Farm	plus 1.9
Site 4: Moat House	0.0
Site 6: Bellwood	minus 0.2

6. For the purpose of determining an infringement of the limits specified in sub-paragraphs (3) and (4) above, if the aircraft was required to take-off with a tailwind, an amount of up to

2dB of the noise recorded at the noise monitor should be disregarded. The amount to be disregarded shall be:

- 0.4 dB for a tailwind of up to 1 knot
- 0.8 dB for a tailwind exceeding 1 knot but not exceeding 2 knots
- 1.2 dB for a tailwind exceeding 2 knots but not exceeding 3 knots
- 1.6 dB for a tailwind exceeding 3 knots but not exceeding 4 knots
- 2.0 dB for a tailwind exceeding 4 knots.

For this purpose, tailwind is to be calculated from the wind data measured in the on-airfield anemometers and wind vanes according to the formula:
(windspeed x cosine (runway heading minus wind direction)) x – 1.

7. Where the aircraft is a jet aircraft, after passing the point referred to in sub-paragraph (1) above, it shall maintain a gradient of climb of not less than 4% to an altitude of not less than 3000 FT. The aircraft shall be operated in such a way that progressively reducing noise levels at points on the ground under the flight path beyond that point are achieved.

8.

a. This sub-paragraph (8) applies to aircraft other than:
i. any propeller driven aircraft whose MTWA does not exceed 5700 KG; or
ii. during the period between 0600 (0500) hours and 2330 (2230) hours, any propeller driven aircraft whose MTWA does not exceed 17000 KG or any Dash 7 aircraft.

b. Subject to sub-paragraph (8) (d) below, after any aircraft to which sub-paragraph (8) applies takes off from any runway specified in the first column of the following table, the aircraft shall follow the Noise Preferential Routeing Procedure specified in the third column of the table which relates to the ATC clearance previously given to the aircraft and specified in the second column of the table, whether flying in IMC or VMC.

c. The ATC clearance via Mayfield specified in the second column of the table will not be available between 2300 (2200) hours and 0700 (0600) hours. Aircraft following the Noise Preferential Routing Procedure which relates to that clearance shall not fly over Crawley, Crawley Down or East Grinstead.

d. Where any aircraft to which this sub-paragraph (8) applies has taken off on a VFR flight plan, it shall follow the applicable Noise Preferential Routeing Procedure before turning onto the intended track.

Take-off Runway	ATC Clearance	Procedure
26L/R	Via ACORN (This route to be used only under Radar Control).	Straight ahead until I-WW DME 2.3 then turn right to intercept DET VOR RDL259 by DET DME 31 to ACORN.
	Via BOGNA	Straight ahead and maintain track 258°. At MID DME 10.5 turn left to intercept OCK VOR RDL176. At OCK DME 28 turn left to intercept MID VOR RDL147 to BOGNA.
	Via Midhurst	Straight ahead and maintain track 258° to intercept MID VOR RDL064

Take-off Runway	ATC Clearance	Procedure
	Via SFD (This route to be used only from 2300 hours to 0600 hours local time)	Straight ahead and maintain track 258° until crossing SFD VOR R319 (I-WW DME 6.8) then turn left to intercept RDL312 to SFD VOR.
	Via Mayfield (This route to be used only from 0700 hours to 2300 hours local time)	Straight ahead until I-WW DME 2.3 then turn left to intercept MAY VOR RDL283 by MAY DME 13 to MAY VOR.
	Circuit Flights	Straight ahead until I-WW DME 2.3 NM before turning across wind.
08L/R	Via DET VOR R260	Straight ahead until I-GG DME 3.5 turn left to intercept DET VOR RDL260 to DET DME 43.
	Via ACORN	Straight ahead until I-GG DME 3.5 then turn left to track 052°M to intercept DET VOR RDL259 by DET DME 20 to ACORN.
	Via TUNBY	Straight ahead and maintain track 078° to intercept DVR VOR RDL271 to TUNBY.
	Via Seaford	Straight ahead until I-GG DME 2.5 then turn right to intercept SFD VOR RDL344 to SFD VOR.
	Circuit Flights	Straight ahead until I-GG DME 2.5 before turning across wind.

9. After taking off the aircraft shall avoid flying over the congested areas of Horley and Crawley.

10. Where the aircraft is approaching the aerodrome to land it shall, commensurate with its ATC clearance, minimise noise disturbance by the use of continuous descent and low power, low drag operating procedures (referred to in Detailed Procedures for descent clearance in section EGKK AD 2.22 of the UK AIP). Where the use of these procedures is not practicable, the aircraft shall maintain as high an altitude as possible. In addition, when descending on initial approach, including the closing heading, and on intermediate and final approach, thrust reductions should be achieved where possible by maintaining a 'clean' aircraft configuration and by landing with reduced flap, provided that in all the circumstances of the flight this is consistent with safe operation of the aircraft.

11. Before landing at the aerodrome the aircraft shall maintain as high an altitude as practicable and shall not fly over the congested areas of Crawley, East Grinstead, Horley and Horsham at an altitude of less than 3000 FT (Gatwick QNH) nor over the congested area of Lingfield at an altitude of less than 2000 FT (Gatwick QNH).

12.

a. Except where sub-paragraph (12) (b) applies, the aircraft shall not join the final approach to either runway at a height of less than 1500 FT AAL.
b. where the aircraft is a propeller driven aircraft whose MTWA does not exceed 5700 KG, it shall not join the final approach to either runway at the aerodrome at a height of less than 1000 FT AAL and shall follow a descent path which will not result in its being at any time lower than the height of the approach path normally indicated by the PAPI.

13.

a. Where the aircraft is using the ILS in IMC or VMC it shall not descend below 2000 FT (Gatwick QNH) before intercepting the glidepath, nor thereafter fly below the glidepath; and
b. an aircraft approaching without assistance from the ILS shall follow a descent path which will not result in its being at any time lower than the height of the approach path normally indicated by the PAPI.

14.

Aircraft which land at Gatwick Airport - London between the hours of 2330 (2230) and 0600 (0500), whether or not making use of the ILS localizer and irrespective of weight or type of approach, shall not join the centre-line:

a. below 3000 FT or
b. closer than 10 NM from touchdown.

15. Without prejudice to the provisions of sub-paragraphs (1)-(14) above, the aircraft shall at all times be operated in a manner which is calculated to cause the least disturbance practicable in areas surrounding the aerodrome.

16. The requirements set out in sub-paragraphs (1)-(15) above may at any time be departed from to the extent necessary for avoiding immediate danger or for complying with the instructions of an Air Traffic Control unit.

4 In this notice, except where the context otherwise requires:

‘dBA’ means a decibel unit of sound level measured on the A-weighted scale, which incorporates a frequency dependent weighting approximating the characteristics of human hearing;

Lmax’ means the highest instantaneous sound level recorded (with the noise monitoring terminal set at the slow meter setting);

other abbreviations used are defined in GEN 2-2 of the United Kingdom Aeronautical Information Publication (Air Pilot).

K Jennings

Divisional Manager

a. S.I. 1981/651.
b. 1982 c.16.
c. S.I. 1978/1303.
d. The Gatwick Airport – London (Noise Abatement Requirements) Notice 2002 signed by G Pendlebury on 30 January 2002.
e. 1972 c.6.

Notes

(These notes are not part of the notice)

1. The Noise Preferential Routeing Procedures specified in the above notice are compatible with normal ATC requirements. The use of the routeings specified above is supplementary to noise abatement take-off techniques as used by piston-engined, turbo-prop, turbo-jet and turbofan aircraft.

2. The attention of operators is drawn to the provisions of Section 78 (2) of the Civil Aviation Act 1982, under which if it appears to the Secretary of State that any of the requirements in this notice have not been complied with as respects any aircraft, he may direct the manager of the aerodrome to withhold facilities for using the aerodrome from the operator of the aircraft. However, the Secretary of State accepts that occasional and exceptional breaches of the noise limits, or of the height requirement, would not be expected to lead to sanctions under Section 78 (2). Such breaches would, however, run the risk of financial penalties.

3. Noise from ground running of aircraft engines is controlled in accordance with instructions issued by Gatwick Airport Limited .

4. To minimise disturbance in areas adjacent to the aerodrome, commanders of aircraft are requested to avoid the use of reverse thrust after landing, consistent with the safe operation of the aircraft, between 2330 (2230) hours and 0600 (0500) hours.

5. Full details concerning the maximum number of occasions and the types of aircraft which are permitted to take off or land at night during specified periods at this aerodrome are promulgated by Supplement.

6. For monitoring purposes, a descent will be deemed to have been continuous provided that no segment of level flight longer than 2.5 nautical miles (NM) occurs below 7000 FT QNH and 'level flight' is interpreted as any segment of flight having a height change of not more than 50 FT over a track distance of 2 NM or more, as recorded in the airport noise and track-keeping system.

7. For monitoring purposes, a departure will be deemed to have complied with the Noise Preferential Routeing (NPR) if, in the portion of flight below the appropriate vectoring altitude (see note 8 below), it is properly recorded by the airports noise and track-keeping (NTK) system as having flown wholly within the Lateral Swathe (LS). The LS is defined from the centre-line of the relevant route coded in the NTK system, based upon a map accredited for this purpose by the Department for Transport, by the closer to the route centre-line depicted on the map of (a) a pair of lines either side, each diverging at an angle of 10° from a point

on the runway centre-line 2000 M from start-of-roll: and (b) a pair of parallel lines representing a distance of 1.5 KM either side of the route centre-line. For avoidance of doubt, the depicted route and LS may include curved sections representing turns.

8. Aircraft which have attained an altitude of 4000 FT (Gatwick QNH) may be directed by air traffic controllers onto a different heading and commanders complying with any such direction will not by reason of so complying be deemed to have departed from the Noise Preferential Routeing. This applies:

a. between 2330 (2230) and 0600 (0500) hours to all take-offs, and
b. between 0600 (0500) and 2330 (2230) hours to:
   i. all departures from Runway 26L/R, other than those cleared via NOVMA, IMVUR, KENET or Southampton SIDs.
   ii. take-offs from Runway 8L/R cleared via Seaford.

Between 0600 (0500) and 2330 (2230) hours aircraft which have taken off from Runway 26L/R cleared via NOVMA, IMVUR, KENET or Southampton SIDs or from Runway 08L/R (other than those cleared via Seaford) and which have attained an altitude of 3000 FT (Gatwick QNH) may be directed by air traffic controllers onto a different heading and commanders complying with any such direction will not by reason of so complying be deemed to have departed from the Noise Preferential Routeing.

9.1.1.22 EGKK AD 2.22 FLIGHT PROCEDURES

9.1.1.22.1.1 1 PROCEDURES FOR INBOUND AIRCRAFT

a. Inbound other than Airways
   i. IFR aircraft inbound to London Gatwick direct from the London FIR will be required to use the procedure via Mayfield holding pattern detailed at paragraph 4(e).
   ii. Pilots inbound to London Gatwick under VFR call Gatwick Director at one of the VFR Reference Points (VRPs) listed at paragraph 13, where aircraft will either be given a route to follow or will be identified by radar and directed into the Approach sequence.
   iii. Except where required by the Instrument Approach Procedures, inbound aircraft to London Gatwick in both VMC and IMC should, whenever possible avoid flight below 3000 FT over towns and other populated areas within the Control Zone. Whenever possible aircraft under radar control will be directed to avoid flying over Crawley, East Grinstead, Horley and Horsham below 3000 FT. When a radar service is not being provided it will be the responsibility of captains of aircraft on VFR flight plans or on visual approaches to ensure compliance.
b. Inbound on Airways
   i. Aircraft inbound to London Gatwick via the Airways System will be routed via the Standard Terminal Arrival Routes (STARs) detailed at AD 2-EGKK-7-1 to AD 2-EGKK-7-17.

9.1.1.22.1.2 2 RADIO COMMUNICATION FAILURE PROCEDURES

a. Inbound Aircraft
   i. In the event of complete radio failure in an aircraft the pilot is to adopt the appropriate procedures notified at ENR 1.1, subsection 3, with the exception described below.

ii. When complete communications failure occurs in the aircraft before ETA, or before EAT when this has been received and acknowledged, the aircraft will:

1. fly to the appropriate holding point (TIMBA, WILLO or Mayfield);
2. hold until the last acknowledged ETA plus 10 minutes or EAT when this has been given;
3. then commence descent for landing in accordance with the approach procedure for the runway-in-use (see AD 2-EGKK-7-18 and AD 2-EGKK-7-19) and effect a landing within 30 minutes (or later if able to approach and land visually).

b. If complete radio communications failure occurs after an aircraft has reported to ATC on reaching the holding point, the aircraft will:

i. hold at the last assigned level at TIMBA, WILLO or Mayfield until:

1. ATA over the holding point plus 10 minutes or 10 minutes after the last acknowledged communication with ATC, whichever is the later; or
2. EAT when this has been received and acknowledged.

ii. then commence descent for landing in accordance with the approach procedure for the runway-in-use (see AD 2-EGKK-7-18 and AD 2-EGKK-7-19) and effect a landing within 30 minutes (or later if able to approach and land visually).

c. When complete radio communication failure occurs during intermediate or final approach under radar control the procedures to be followed are detailed at AD 2-EGKK-5-1.

d. When complete radio communication failure occurs in the aircraft following a missed approach the aircraft will:

i. fly the appropriate missed approach procedure to Mayfield VOR/DME;
ii. complete at least one holding pattern at 3000 FT;
iii. then commence descent for landing in accordance with the approach procedure for the runway-in-use (see AD 2-EGKK-7-18 and AD 2-EGKK-7-19) and effect a landing within 30 minutes (or later if able to approach and land visually).

e. The routes and levels to be used when leaving the Zone or Holding Area in accordance with the procedures given at ENR 1.1, subsection 3 are shown in the table below, the route to be followed is dependent on the position of the aircraft at the time the decision to leave the Zone is made.

Position at time of decision	Route
Mayfield	Track 250°T at last assigned altitude
TIMBA	Track 090°T at last assigned level
WILLO	Track 230°T at last assigned level/altitude

9.1.1.22.1.3 3 RADIO COMMUNICATION FAILURE PROCEDURES OUTBOUND AIRCRAFT

a. Outbound traffic operating on FRANE 1M/1V/1P/1W/1Z: If a clearance to climb or re-routing instructions have not been given, comply with the route and altitude limitations detailed in the allocated Standard Instrument Departure Procedures listed at AD 2-EGKK-6-4/6-5, at FRANE route via M604 to DAGGA and maintain 6000 FT until DAGGA; at DAGGA, commence climb to flight planned level.

b. All outbound traffic except those operating on FRANE 1M/1V/1P/1W/1Z: Comply with the route and altitude limitations detailed in the allocated Standard Instrument Departure Procedures (listed at AD 2-EGKK-6-1 to AD 2-EGKK-6-22) or ATC clearance and commence climb to flight planned level after the last position at which an altitude is specified.

9.1.1.22.1.4 4 HOLDING

a. Aircraft inbound to London Gatwick Airport using the ATS Route Network will, after the initial routing, follow the appropriate STAR to the holding fixes TIMBA or WILLO. The STARs are illustrated at AD 2-EGKK-7-1 to 7-17. For aircraft holding below 6000 FT ALT, holding will be at Mayfield MAY VOR. (In light traffic conditions aircraft may be routed direct to MAY VOR above 6000 FT).
b. Pilots unable to comply with ATC clearance must notify ATC as soon as possible.
c. Aircraft may be radar-vectored off-route for the purpose of ATC separation. When separation has been achieved, ATC will give an approximate QDM to resume the STAR via the appropriate VOR radial or fix.
d. In the event of aircraft equipment failure, ATC must be advised and ATC instructions complied with.
e. Mayfield VOR/DME Holding Pattern:
   i. This procedure will be used by aircraft inbound to London Gatwick from the FIR, after missed approach, via airways when instructed by London Control or when instructed by Gatwick Director.
   ii. Aircraft will hold on an axis of 090° MAG (RDL 270°) turning left at the facility, generally from 3000 FT ALT to 6000 FT ALT. The end of the outbound leg is at 5 DME MAY.
   iii. Altitudes at and below 6000 FT ALT will be allocated by Gatwick Director.

9.1.1.22.1.5 5 APPROACH PROCEDURES WITH RADAR CONTROL

a. When inbound traffic is being sequenced by Surveillance Radar, that part of the approach between the holding fix and the Final Approach Track (FAT) will be flown under directions from the Radar Controller. Once the aircraft is under Radar Control, changes of heading or flight level/altitude will be made only on instructions from the Radar Controller except in the case of radio communication failure in the aircraft or at the radar unit.

9.1.1.22.1.6 6 DETAILED PROCEDURES

a. Headings and flight levels at which to leave the holding facility will be passed by ATC. Radar vectors will be given, and descent clearance will include an estimate of track distance to touchdown. Further distance information will be given between initial descent clearance and intercept heading to the ILS. On receipt of descent clearance the pilot will descend at the rate he judges will be best suited to the achievement of continuous descent, the object being to join the glide path at the appropriate height for the distance without recourse to level flight.
b. During intermediate approach (after leaving the hold until approximately 6 NM before turning onto the ILS intercept heading), aircraft will be instructed to fly in the speed range 210 KT – 220 KT as required. Thereafter and until established on final approach, the highest possible speed within the band is 160 KT – 180 KT.

Inbound aircraft must be established at 160 KT, on a stable approach at not less than 7 NM from touchdown. For aircraft that are unable to maintain 160 KT to 4 NM from touchdown, TC Gatwick will ascertain the final approach speed and inform the air controller. These procedures do not apply during SRA. TC Gatwick may transfer high speed traffic to air without prior co-ordination provided that the pilot is instructed to report speed on initial contact. However, TC Gatwick must effect prior co-ordination if separation from a following aircraft is dependent on the leading aircraft maintaining a speed higher than 160 KT.

c. The system is designed to maximize arrival capacity at London Gatwick and to minimize noise disturbance in the areas overflown during the approach and aircraft commanders are requested to conform to low-power, low-drag procedures.

d. The spacing provided between aircraft will be designed to achieve maximum runway utilization within the parameters of safe separation minima (including vortex effect) and runway occupancy. It is important to the validity of the separation provided, and to the achievement of optimum runway capacity, that runway occupancy time is kept to a minimum consistent with the prevailing conditions.

e. Missed Approach Procedures are contained on the Instrument Approach charts.

9.1.1.22.1.7 7 PRESSURE SETTINGS

a. When below the Transition Altitude, pilots are to fly on the aerodrome QNH until established on final approach, at which point QFE or any other desired setting may be used.

9.1.1.22.1.8 8 RADAR FAILURE

a. In the event of radar failure, fresh instructions will be issued to each aircraft under radar control and the procedures in paragraph 9 will be brought into use.

9.1.1.22.1.9 9 RADIO COMMUNICATIONS FAILURE AT THE RADAR UNIT

a. If radio communication completely fails at the radar unit when aircraft are under Radar Control, pilots will revert to Aerodrome Control for fresh instructions.

9.1.1.22.1.10 10 APPROACHES WITHOUT RADAR

a. When traffic is not being sequenced by Surveillance Radar, aircraft will be cleared from the holding areas to carry out the appropriate approach procedure as outlined at AD 2-EGKK-7-18 and AD 2-EGKK-7-19.

9.1.1.22.1.11 11 PROCEDURES FOR OUTBOUND AIRCRAFT

a. In order to improve ATC flexibility and alleviate airspace congestion in the London TMA, alternative SID procedures are available for tactical allocation by ATC to aircraft normally routeing via MIMFO, FRANE and LAM SIDs from Runway 26. The alternative SIDs are designated WIZAD (for MIMFO), TIGER (for LAM) and DAGGA (for FRANE) and may be offered to aircraft at a late stage during taxiing dependent upon the overall traffic situation within the TMA. Pilots should be prepared to accept the alternative SID when offered, but if unable to do so must advise ATC in which case the normal SID clearance will be issued.

b. RNAV SIDs are available only to aircraft which are equipped and operated in accordance with the requirements of JAA TGL-10, or equivalent, and approved by their State of Registry for RNAV 1 operations.

i. In addition, RNAV 1 SIDs are only available to those aircraft that are either GNSS equipped or that have **DME/DME and INS/IRU with an automatic runway update.**

ii. Aircraft which are not capable/certified as detailed in (b) and (i) above shall fly the conventional navigation version of the SID as detailed in the appropriate charts in AD 6.

iii. There are no critical navaids associated with the RNAV 1 SIDs assuming the use of GNSS or INS/IRU for initial guidance up to an altitude of 2000 FT. RNAV 1 SIDs are detailed in AD 6 together with appropriate navigation database coding tabulation.

iv. RNAV 1 SIDs are available for use, at ATC discretion, on a 24 hour basis (H24), unless otherwise stated on the chart.

v. RNAV 1 SIDs are clearly identified and distinguishable from conventional SIDs by the use of a specific suffix, which will be a 'Z' for 08R departures and an 'X' character for 26L departures. RNAV 1 SIDs are NOT available for use from Runway 26R/08L; Conventional Navigation SID will be issued by ATC for 26R/08L departures.

vi. Crews will be issued with an RNAV1 SID if their flight plan includes information such that the aircraft is RNAV1 capable. Crews shall request an ATC clearance for conventional SID route if unable to comply with RNAV1. On first RTF call after airborne, crews are to advise London Control/Gatwick Radar of the full SID designator as part of the requirements for initial calls on departure, e.g. "London Control, Fastjet 123 NOVMA 1X passing 2000 FT, climbing to altitude 4000 FT".

vii. Intersection departures **are** permitted for aircraft flying the RNAV SIDs. Aircrew flying aircraft that are not GNSS equipped and that are departing from an intersection shall ensure that the relevant actions have been taken on the flight deck so that the FMS has been updated and is informed that the aircraft will be departing from an intersection. This will ensure that the correct co-ordinates are used by the Inertial Navigation System / Inertial Reference Unit upon selection of TOGA and therefore reduce the risk of a map shift event on departure.

viii. Speed limits apply at specified waypoints for track containment purposes.

ix. Aircraft flying on RNAV 1 SIDs can expect to receive radar vectors from ATC as per the operating procedure for conventional SIDs.

x. Conventional SIDs: Conventional SIDs will be used for those aircraft which do not specify a preference for RNAV SID clearance or for when an ATC clearance cannot be issued for the use of the RNAV SIDs.

9.1.1.22.1.12 12 SPEED LIMITATION

a. Departure Speed Restriction: In order to optimise the departure flow and assist in the separation between successive departing aircraft a speed limit of 250 KT IAS below FL 100 is applicable until removed by ATC. ATC may remove the speed restriction by using the phrase ‘No ATC Speed Restriction’. Pilots are reminded that this phrase does not relieve the pilot of the responsibility to adhere to the ground track of the Noise Preferential Route, which may require a speed/power limitation.

b. If for any reason pilots are unable to comply with the 250 KT IAS speed restriction the pilot should immediately advise ATC and state the minimum speed acceptable. If a pilot anticipates before departure that they will be unable to comply with the speed restriction, they should inform ATC when requesting start-up clearance, stating the minimum speed acceptable. In this case the pilot will be informed before take-off of any higher speed limitation.

9.1.1.22.1.13 13 SPECIAL VFR FLIGHTS

a. Special VFR clearances for flights within the Gatwick CTR may be requested and will be given whenever traffic conditions permit. These flights are subject to the general conditions laid down for Special VFR flights and will normally be given only to aircraft which carry RTF including the appropriate frequencies.
Note: Pilots holding a Private Pilots Licence (Aeroplanes) are reminded of the visibility requirements for Special VFR flights laid down in Schedule 7 of the Air Navigation Order 2009 and the related notification in paragraph 1.2.
b. The use of Special VFR clearances is intended to be confined to the following types of flight:

i. Light aircraft which cannot comply with full IFR requirements and wish to proceed to or from London Gatwick Airport;
ii. light aircraft which cannot comply with full IFR requirements and wish to transit the Gatwick CTR.

c. Special VFR clearances to operate within the Gatwick CTR for the purpose of proceedings to or from London Gatwick Airport will not be granted to fixed-wing aircraft if the reported visibility at the Airport is less than 3 KM or the reported cloud ceiling is less than 1000 FT.
d. Aircraft may be given a radar service whilst within the zone if, due to the traffic situation, ATC considers it advisable. It will remain the responsibility of the pilot to remain at all times in flight conditions which will enable him to determine his flight path and to keep clear of obstacles, and to ensure that he is able to comply with the relevant low flying restrictions of SERA and the Rules of the Air Regulations 2015, with particular regard to SERA.3105 Minimum Heights, pilots must inform the radar controller if compliance entails a change of heading or height.
e. Special VFR flights may be subject to delay when parts of their route are outside radar cover or when they cannot be fitted readily into the main traffic flow. Pilots should, therefore, always ensure that they have adequate fuel reserves and are able to divert to another aerodrome if necessary.

9.1.1.22.1.14 14 VISUAL REFERENCE POINTS (VRP)

a. For the benefit of pilots on VFR flights who prefer to determine their position by radio navigation aids, rather than by visual pin-points, suitably defined VRPs for London Gatwick are given below:

VRP	VOR/VOR	VOR/DME FIX
Billingshurst 510054N 0002700W	MID RDL 109° GWC RDL 050°	MID 109°/7 NM
Dorking 511337N 0002006W	BIG RDL 246° LON RDL 163°	BIG 246°/15 NM LON 163°/16 NM
Guildford 511422N 0003506W	MID RDL 007° BIG RDL 257°	MID 007°/11 NM
Handcross	MID RDL 090°	MID 090°/16 NM

VRP	VOR/VOR	VOR/DME FIX
510310N 0001208W	SFD RDL 325°	MAY 280°/12 NM
Haywards Heath 510027N 0000546W	MID RDL 097° SFD RDL 331°	MID 097°/20 NM MAY 266°/8 NM
Tunbridge Wells 510800N 0001554E	BIG RDL 144° DET RDL 231°	BIG 144°/15 NM MAY 039°/9 NM

9.1.1.22.1.15 15 FREQUENCY MONITORING CODE (FMC)

a. Pilots operating in the vicinity of, but intending to remain outside the Gatwick controlled airspace within the area defined by straight lines joining successively the following points and maintaining a listening watch only on Gatwick Director frequency, 126.825 MHz, are encouraged to select SSR code 7012.

505832N 0003428W - 510314N 0003730W -
511422N 0003506W - 511957N 0001917E -
511217N 0002018E - 510002N 0001541E -
505900N 0001333E - 505541N 0001007W -
505832N 0003428W.

b. Selection of 7012 does not imply the receipt of an ATC service. Aircraft displaying the code are not expected to contact ATC under normal circumstances, remain responsible for their own navigation, separation, terrain clearance and are expected to remain clear of the Gatwick controlled airspace at all times.

c. Whilst squawking 7012, pilots should be aware that Gatwick Director may make blind transmissions in order to ascertain a particular aircraft's intentions/route.

d. When a pilot ceases to maintain a listening watch, code 7012 shall be deselected.

9.1.1.23 EGKK AD 2.23 ADDITIONAL INFORMATION

9.1.1.23.1.1 1 MODE S BAROMETRIC PRESSURE SETTING DATA

a. London Terminal Control has the ability to downlink Mode S Barometric Pressure Setting (BPS) data. Therefore, if the downlinked pressure data is at variance with the BPS expected by Air Traffic Control, pilots can expect additional challenge. When Air Traffic Control pass a reminder of the appropriate BPS, it is anticipated that the aircrew will cross check the altimeter settings and confirm set.

9.1.1.24 EGKK AD 2.24 CHARTS RELATED TO AN AERODROME

Chart	IMPACT?
AERODROME CHART - ICAO	No

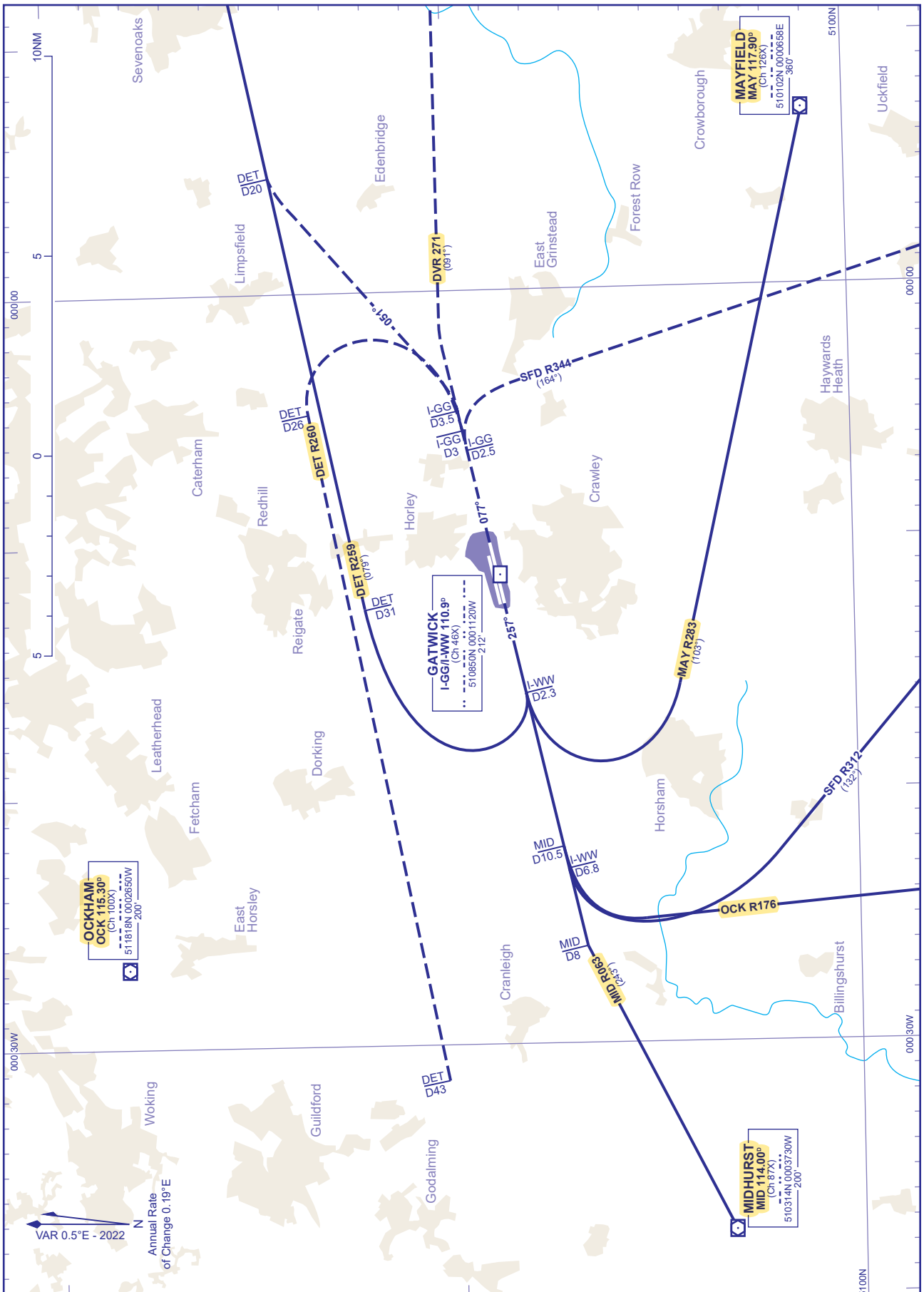
AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING CHART - ICAO	No
AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING STAND COORDINATES	No
GROUND MOVEMENT CHART HOLDING AREAS - ICAO	No
AERODROME CHART CODE F AIRCRAFT GROUND MOVEMENT - ICAO	No
AIRCRAFT GROUND MOVEMENT - REMOTE DE-ICING AREAS LOCATION CHART - ICAO	No
NOISE PREFERENTIAL ROUTEINGS	YES Major
ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO	YES Minor
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R/L LAM 5P 5W - ICAO	YES Major
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L/R LAM 6M 6V - ICAO	YES Major
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R LAM 1Z - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R/L 26L/R FRANE 1M 1V 1P 1W - ICAO	YES Major
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R FRANE 1Z - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L/R HARDY 5M 5V BOGNA 1M 1V - ICAO	YES Major
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L BOGNA 1X HARDY 1X - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R/L 26L/R KENET 3P 3W NOVMA 1M 1V SAM 3P 3W - ICAO	YES Major
RNAV1 (DME/DME OR GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R 26L IMVUR 1Z NOVMA 1X - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R/L 26L/R SFD 5M 5V 9W 9P - ICAO	YES Minor
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R 26L SFD 4Z 1X - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L/R WIZAD 4M 4V - ICAO	YES Major
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L WIZAD 1X - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R/L 26L/R MIMFO 1M 1V DVR 2P 2W - ICAO	YES Major
RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 08R ODVIK 2Z - ICAO	No
STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L/R TIGER 3M 3V DAGGA 1M 1V - ICAO	YES Major

RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 26L TIGER 1X DAGGA 1X - ICAO	No
STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 08R LAM 1Z FRANE 1Z	No
STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L BOGNA 1X HARDY 1X	No
STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 08R IMVUR 1Z RWY 26L NOVMA 1X RWY 08R SFD 4Z RWY 26L SFD 1X	No
STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L WIZAD 1X RWY 08R ODVIK 2Z	No
STANDARD INSTRUMENT DEPARTURE CODING TABLES - RWY 26L TIGER 1X DAGGA 1X	No
RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART-INSTRUMENT (STAR) BARMI 1G TEBRA 2G KONAN 2G - ICAO	No
RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) MID 1X - ICAO	No
RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) NEVIL 1G KUNAV 1G - ICAO	No
RNAV1 (DME/DME OR GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) OTMET 1G VASUX 1G - ICAO	No
RNAV1 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) AMDUT 1G ARNUN 1G - ICAO	No
RNAV1 (DME/DME OR GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) TELTU 1G - ICAO	No
RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) DISIT 1G KIDLI 1G - ICAO	No
RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT (STAR) ABSAV 1G BEDEK 1G GWC 1G - ICAO	No
STANDARD INSTRUMENT ARRIVAL CODING TABLES BARMI 1G TEBRA 2G KONAN 2G	No
STANDARD INSTRUMENT ARRIVAL CODING TABLES MID 1X NEVIL 1G KUNAV 1G	No
STANDARD INSTRUMENT ARRIVAL CODING TABLES OTMET 1G VASUX 1G AMDUT 1G ARNUN 1G	No
STANDARD INSTRUMENT ARRIVAL CODING TABLES TELTU 1G DISIT 1G KIDLI 1G	No
STANDARD INSTRUMENT ARRIVAL CODING TABLES ABSAV 1G BEDEK 1G GWC 1G	No
RNAV HOLD CODING TABLES ADLOG AMDUT ARNUN BILNI DELBO DOMUT GOKTU	No
RNAV HOLD CODING TABLES GWC KATHY TIMBA WILLO	No
INITIAL APPROACH PROCEDURES ILS RWY 08R Without Radar Control	YES Major
INITIAL APPROACH PROCEDURES ILS RWY 26L Without Radar Control	YES Major

INSTRUMENT APPROACH CHART ILS/DME RWY 08R - ICAO	YES Minor
INSTRUMENT APPROACH CHART LOC/DME RWY 08R - ICAO	YES Minor
INSTRUMENT APPROACH CHART SRA RTR 2 NM RWY 08R - ICAO	YES Minor
INSTRUMENT APPROACH CHART RNP RWY 08R - ICAO	YES Minor
INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 08L - ICAO	YES Minor
INSTRUMENT APPROACH CHART RNP RWY 08L - ICAO	YES Minor
INSTRUMENT APPROACH CHART ILS/DME RWY 26L - ICAO	YES Minor
INSTRUMENT APPROACH CHART LOC/DME RWY 26L - ICAO	YES Minor
INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 26L - ICAO	YES Minor
INSTRUMENT APPROACH CHART RNP RWY 26L - ICAO	YES Minor
INSTRUMENT APPROACH CHART SRA RTR 2 NM RWY 26R - ICAO	YES Minor
INSTRUMENT APPROACH CHART RNP RWY 26R - ICAO	YES Minor
INSTRUMENT APPROACH PROCEDURE CODING TABLES - RNP RWY 08L/R and 26L/R	No

10 Appendix B: MATS Part 2 Assessment

NOISE PREFERENTIAL ROUTINGS



CHANGE (9/20): MAG VAR. MID VOR RECALIBRATED. MAG TRACKS/BEARINGS.

APP	126.825, 118.950*, 129.025*	GATWICK DIRECTOR
TWR	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

TRANSITION ALTITUDE **6000**

TRANSITION LEVEL **ATC**

AREA MNM ALT (x100) **24**

000 30W 000 00 000 30E

R160 UNL SFC

D133B 1200 (OCNL 2400) SFC

D133A 1200 SFC

D132 2500 SFC

22 23 24

GATWICK
I-GG 110.9º
(Ch 120X)
510907N 0000946W
212

FAP/FAF
I-GG D8.6

MIDHURST
MID 114.00º
(Ch 87X)
510314N 0003730W
200

MAY D23 3000 MAY D18

MID D5

MAY R275
MID R095

MAY D5

268° 258° 088°

3000 4000

MAYFIELD
MAY 117.90º
(Ch 126X)
510102N 0000658E
360

5100N

MID R104

3000 MID D11

WILLO
505906N 0001130W
MID R103.7/D16.9

SFD D17

284° 4000 302° 104° 122° 4000

MID D22

SFD R331

SFD R302

ASTRA
505156N 0000847W
SFD R301.9/D12.0

HOLLY
505312N 0000542W
MID R116.0/D22.5

MAY R128

128° 308° 4000

TIMBA
505644N 0001542E
MAY R127.9/D7.0

SEAFORD
SFD 117.00º
(Ch 117X)
504538N 0000719E
300

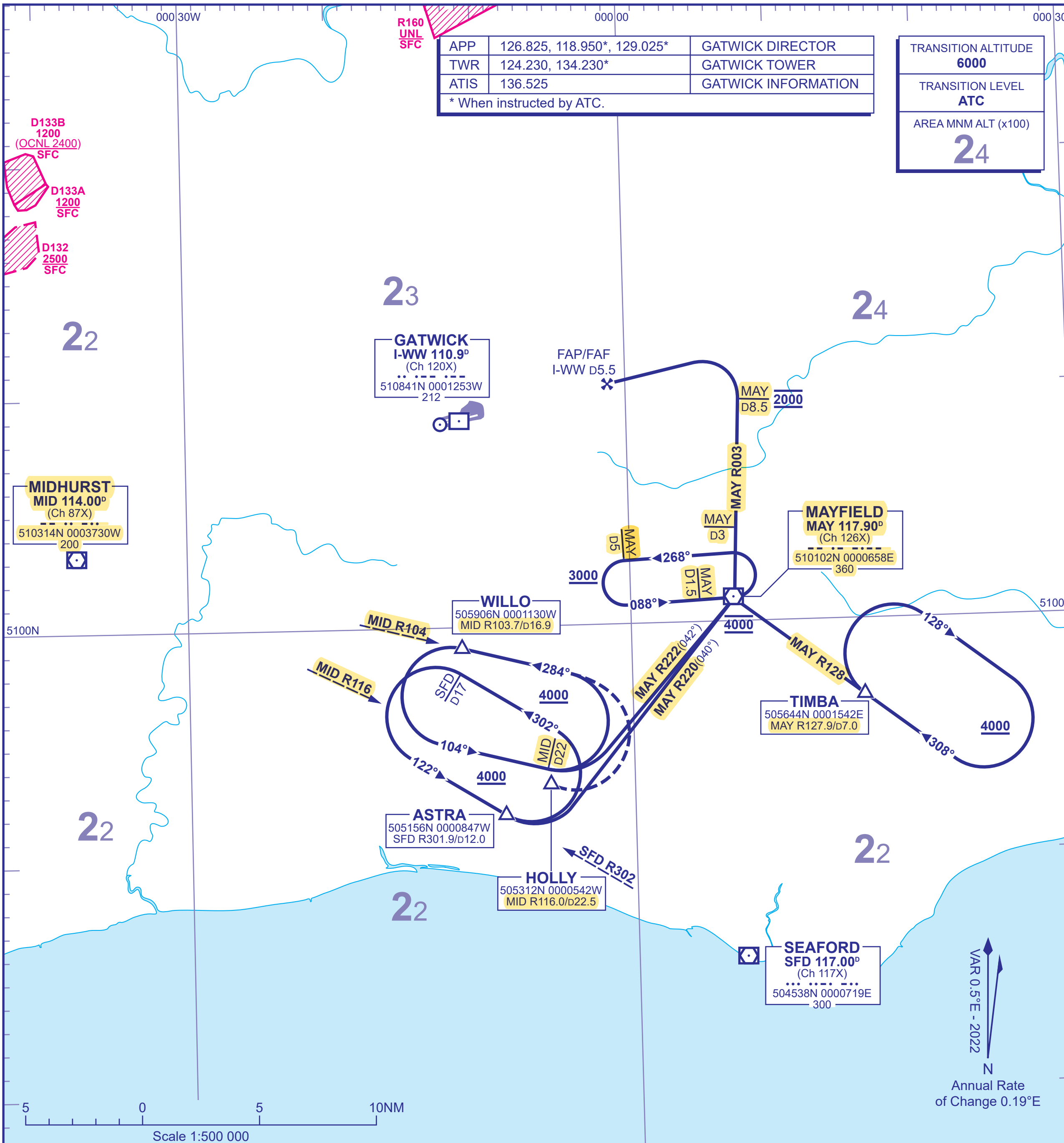
VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

5 0 5 10NM
Scale 1:500 000

When traffic is not being sequenced by Surveillance Radar, aircraft will be cleared from the holding areas to carry out the approach procedure to ILS RWY 08R as outlined below:

TIMBA	When established inbound in the holding pattern (QDM 308°) commence descent to **4000** and proceed to **MAY VOR**. Leave **MAY VOR** on R275 continuing descent to **3000**. Cross **MAY** D18 at **3000**. At **MAY** D23 turn right to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; Descending to **4000**
WILLO	Descend in the holding pattern to **4000**. Leave **WILLO** on **MID VOR** R104 then descend to **3000**. Cross **MID** D11 at **3000**. At **MID** D5 turn right to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **4000**
ASTRA	Descend in the holding pattern to **4000**. Leave **ASTRA** with a left turn to intercept **SFD VOR** R331 then descend to **3000**. Turn left to intercept **MAY VOR** R275. Cross **MAY** D18 at **3000**. At **MAY** D23 turn right to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **4000**
MAYFIELD VOR/DME	Overhead **MAY VOR/DME**. Continue outbound turn onto track 258° to intercept and follow **MAY** R275 at **3000**. At **MAY** D23 turn right to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **3000**

GENERAL INFORMATION
1 Missed Approach Procedures are detailed on the Instrument Approach Charts.
2 These initial approach procedures are designed for manoeuvring speeds up to 240KT TAS and assume aircraft can maintain a descent of approximately 300 per nautical mile.
3 Change to altimeter setting for landing when cleared to **2000** or below.
4 WILLO HOLD: HOLLY is routeing/entry fix for STARs via MID. Holding pattern is DME limited at MID D22.



When traffic is not being sequenced by Surveillance Radar, aircraft will be cleared from the holding areas to carry out the approach procedure to ILS RWY 26L as outlined below:

TIMBA	When established inbound in the holding pattern (QDM 308°) commence descent to **4000** and proceed to **MAY VOR**. Leave **MAY VOR** on R003 descending to **2000**. At **MAY** D8.5 turn left to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; Descending to **4000**
WILLO	Descend in the holding pattern to **4000**. Leave the outbound leg of the hold at **MID** D22 with a left turn to intercept R222 (042°) to **MAY VOR**. Leave **MAY** on **VOR** R003 descending to **2000**. At **MAY** D8.5 turn left to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **4000**
ASTRA	Descend in the holding pattern to **4000**. Leave **ASTRA** with a left turn to intercept R220 (040°) to **MAY VOR**. Leave **MAY** on **VOR** R003 descending to **2000**. At **MAY** D8.5 turn left to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **4000**
MAYFIELD	From **MAY** D1.5 on the inbound leg of the holding pattern, turn left to intercept and follow **MAY** R003. When established, after passing **MAY** D3 descend to **2000**. At **MAY** D8.5 turn left to intercept the ILS localiser and continue ILS approach as detailed on Instrument Approach Chart.	ALT at which to leave; **3000**

GENERAL INFORMATION
1 Missed Approach Procedures are detailed on the Instrument Approach Charts.
2 These initial approach procedures are designed for manoeuvring speeds up to 240KT TAS and assume aircraft can maintain a descent of approximately 300 per nautical mile.
3 Change to altimeter setting for landing when cleared to **2000** or below.

CHANGE (13/20): PAGE NUMBER.

LONDON GATWICK
RWY 08R/L 26L/R

KENET 3P 3W NOVMA 1M 1V SAM 3P 3W

AERO INFO DATE 02 JUN 20

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS. MID VOR RECALIBARATED. MID VOR RADIALS.

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

KENET 3P/3W RWY 08R/L†	Straight ahead until **I-GG** D3, then turn left to intercept **DET VOR** R260. Crossing **DET** D26 at **2500** or above (4%). Follow **DET VOR** R260 to intercept **SAM VOR** R068. Crossing **DET** D36 at **3000**. Crossing **DET** D43 (**SAM** D33) at **4000**. At **SAM** D20 turn right to intercept **GWC VOR** R327 to **KENET** (**LON VOR** R274/D37).	L9, N14.
NOVMA 1M/1V RWY 26L/R†	Straight ahead, maintain track 257° to intercept **MID VOR** R063 (**MID** D8) to **MID VOR**. Cross **MID** D10 above **2500**. Cross **MID VOR** R063/D8 above **3000**. Cross **MID VOR** at **4000**. Follow **MID VOR** R258 to **NOVMA**.	L620.
SAM 3P/3W RWY 08R/L†	Straight ahead until **I-GG** D3. Turn left to intercept **DET VOR** R260, cross **DET** D26 at **2500** or above (4%). Cross **DET** D36 at **3000**. Follow **DET VOR** R260 to intercept **SAM VOR** R068 to **SAM VOR**. Cross **DET** D43 (**SAM** D33) at **4000**.	Q41, L620, N621, N866.

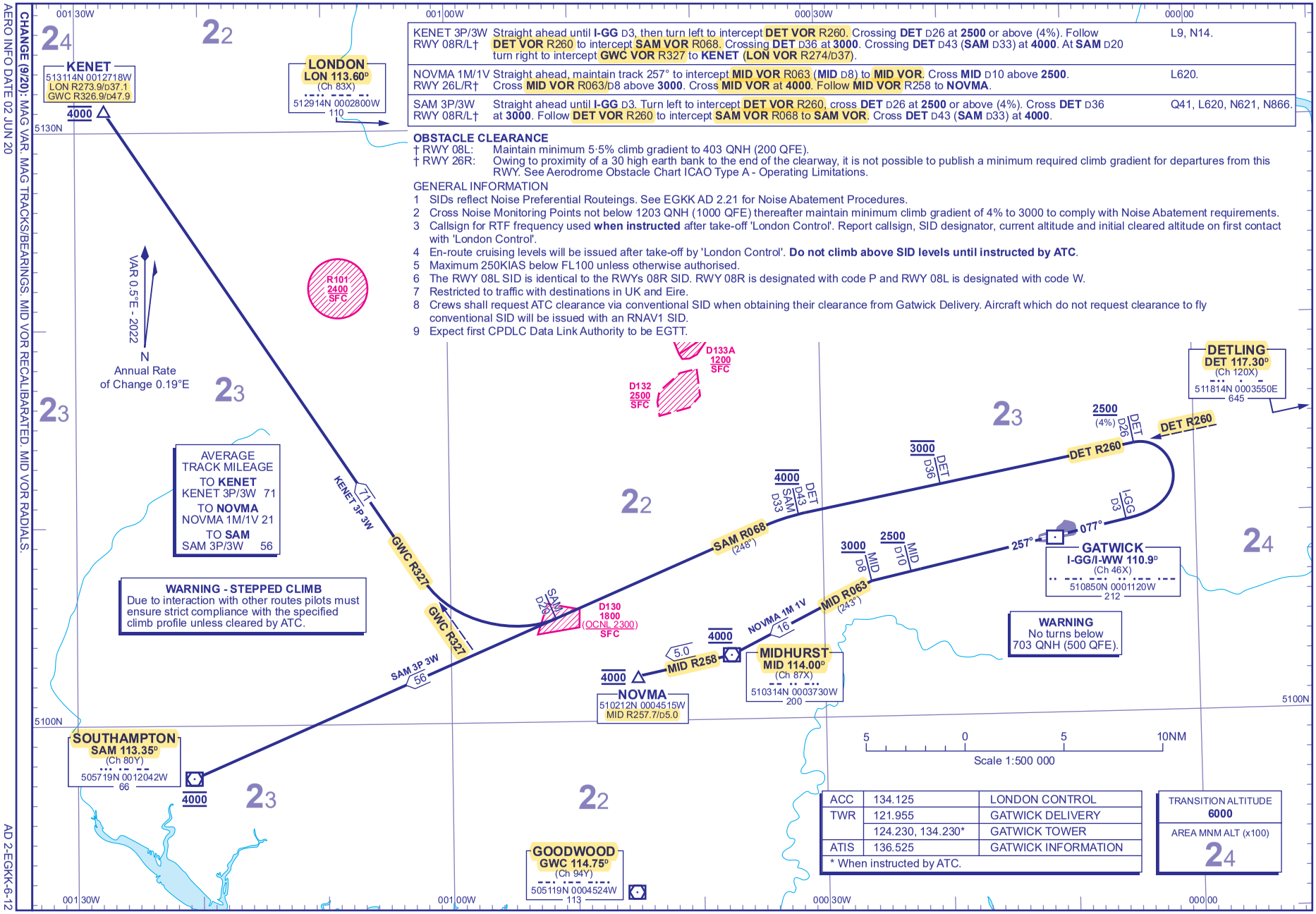
OBSTACLE CLEARANCE

† RWY 08L: Maintain minimum 5·5% climb gradient to 403 QNH (200 QFE).

† RWY 26R: Owing to proximity of a 30 high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION

1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 The RWY 08L SID is identical to the RWYs 08R SID. RWY 08R is designated with code P and RWY 08L is designated with code W.
7 Restricted to traffic with destinations in UK and Eire.
8 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
9 Expect first CPDLC Data Link Authority to be EGTT.



ACC	134.125	LONDON CONTROL
TWR	121.955	GATWICK DELIVERY
	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

TRANSITION ALTITUDE
6000

AREA MNM ALT (x100)
2 4

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 08R/L
LAM 5P 5W

TRANSITION ALTITUDE **6000**		
AREA MNM ALT (x100) **24**		
ACC	120.530	LONDON CONTROL
TWR	121.955	GATWICK DELIVERY
	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

00030W 000 00 000 30E

5130N 5100N

LAMBOURNE
LAM 115.60ᴰ
(Ch 103X)
513846N 0000906E
200

BIGGIN
BIG 115.10ᴰ
(Ch 98X)
511951N 0000205E
590

DETLING
DET 117.30ᴰ
(Ch 120X)
511814N 0003550E
645

ACORN
511519N 0001146E
BIG R127.1/D7.6
LAM R176.1/D23.5
DET R259.0/D15.4

GATWICK
I-GG/I-WW 110.9ᴰ
(Ch 46X)
510850N 0001120W
212

R158 1400 SFC
R157 1400 SFC
R159 1400 SFC
R107 2000 SFC
R160 UNL SFC

6000
LAM 5P 5W 32
LAM D10 6000
5000 LAM D15
LAM R157 (337°)
DET D10.5
5000
DET R259 (079°)
DET D20
LAM 5P 5W 15
051°
077°
I-GG D3.5

2₁ 1₈ 2₂ 2₃ 2₄ 2₀ 1₉ 2₂ 2₂

WARNING - STEPPED CLIMB
Due to interaction with other routes pilots must ensure strict compliance with the specified climb profile unless cleared by ATC.

WARNING
No turns below 703 QNH (500 QFE).

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

5 0 5 10NM
Scale 1:500 000

AVERAGE TRACK MILEAGE TO **LAM VOR**
LAM 5P/5W 47

LAM 5P/5W RWY 08R/L†	Straight ahead until **I-GG** D3.5, then turn left to track 051° to intercept **DET VOR** R259 by **DET** D20. Crossing **DET** D15.4 (**ACORN**) at **5000**. At **DET** D10.5 turn left to intercept **LAM VOR** R157 to **LAM VOR**. Crossing **LAM** D15 at **5000**. Crossing **LAM** D10 at **6000**. Crossing **LAM VOR** at **6000**.	N57, UN57, L10, (N601, UN601 via **BPK**).

OBSTACLE CLEARANCE
† RWY 08L: Maintain minimum 5·5% climb gradient to 403 QNH (200 QFE).

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SID for RWY 08L is identical to those for RWY 08R. RWY code W is allocated to 08L.
7 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
8 Expect first CPDLC Data Link Authority to be EGTT.

000 30W 000 00 000 30E

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L/R
HARDY 5M 5V BOGNA 1M 1V

ACC	133.180	LONDON CONTROL
TWR	121.955	GATWICK DELIVERY
	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

TRANSITION ALTITUDE
6000
AREA MNM ALT (x100)
24

000 30W 000 00

D133B 1200 (OCNL 2400) SFC
D133A 1200 SFC
D132 2500 SFC

OCKHAM
OCK 115.30D
(Ch 100X)
511818N 0002650W
200

22 23 24 22 22 22

OCK R165 2500 MID D10.5
257°
GATWICK
I-GG/I-WW 110.9D
(Ch 46X)
510850N 0001120W
212

3000 OCK D13
OCK R176

WARNING
No turns below
703 QNH (500 QFE).

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

MIDHURST
MID 114.00D
(Ch 87X)
510314N 0003730W
200

5100N

5000 OCK D18

BOGNA 1M 1V 35 HARDY 5M 5V

WARNING - STEPPED CLIMB
Due to interaction with other routes pilots must ensure strict compliance with the specified climb profile unless cleared by ATC.

6000 OCK D23

OCK D28

GOODWOOD
GWC 114.75D
(Ch 94Y)
505119N 0004524W
113

MID R146

SEAFORD
SFD 117.00D
(Ch 117X)
504538N 0000719E
300

6000
BOGNA
504207N 0001506W
GWC R115.4/D21.3
MID R145.7/D25.5

GWC R115

HARDY 5M 5V 32

HARDY
502816N 0002928E
GWC R115.4/D52.9
SFD R140.9/D22.4
6000

AVERAGE TRACK MILEAGE TO **HARDY**
HARDY 5M/5V 67
TO **BOGNA**
BOGNA 1M/1V 35

5 0 5 10NM
Scale 1:500 000

D037 55000 SFC

HARDY 5M/5V RWY 26L/R†	Straight ahead, maintain track 257°. At **MID** D10.5 turn left onto **OCK VOR** R176. Crossing **MID** D10.5 above **2500**. Crossing **OCK VOR** R176/D13 above **3000**. Crossing **OCK** D18 at **5000**. Crossing **OCK** D23 at **6000**. At **OCK** D28 turn left onto **MID VOR** R146 to **BOGNA** intersection. At **BOGNA** intercept **GWC VOR** R115 to **HARDY**.	**HARDY** to M605 southbound.
BOGNA 1M/1V RWY 26L/R†	Straight ahead, maintain track 257°. At **MID** D10.5 turn left onto **OCK VOR** R176. Crossing **MID** D10.5 above **2500**. Crossing **OCK** D18 at **5000**. Crossing **OCK** D23 at **6000**. At **OCK** D28 turn left onto **MID VOR** R146 to **BOGNA** intersection.	BOGNA to L612 or BOGNA - L612 - Y47 for L151, M189 southbound.

5030N

OBSTACLE CLEARANCE
† RWY 26R: Owing to proximity of a 30FT high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWYs 26L and 26R are identical. RWY codes M and V are allocated respectively.
7 HARDY 5M/5V and BOGNA 1M/1V will not be available between the hours of 2300-0600 winter and 2200-0500 summer. During these hours pilots will be issued with a SEAFORD 4M/4V SID.
8 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.

000 30W 000 00

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS. MID VOR RECALIBARATED. MID VOR RADIAL.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L/R
LAM 6M 6V

00030W 000 00 000 30E

TRANSITION ALTITUDE
6000
AREA MNM ALT (x100)
24

ACC	120.530	LONDON CONTROL
TWR	121.955	GATWICK DELIVERY
	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

LAMBOURNE
LAM 115.60
(Ch 103X)
513846N 0000906E
200

21 18 22 23 24 20

R158 1400 SFC
R157 1400 SFC
R159 1400 SFC
R107 2000 SFC
R160 UNL SFC

5130N 5100N

LAM 6M 6V 32
6000
LAM D10
LAM D15
5000
LAM R157 (337°)
DET D10.5

BIGGIN
BIG 115.10
(Ch 98X)
511951N 0000205E
590

DETLING
DET 117.30
(Ch 120X)
511814N 0003550E
645

ACORN
511519N 0001146E
BIG R127.1/D7.6
LAM R176.1/D23.5
DET R259.0/D15.4

WARNING - STEPPED CLIMB
Due to interaction with other routes pilots must ensure strict compliance with the specified climb profile unless cleared by ATC.

WARNING
No turns below 703 QNH (500 QFE).

MAX 250 KIAS **4000**
MAX 220 KIAS **3200**
DET D31
DET D29
DET R259 (079°)
LAM 6M 6V 24
5000

257°
I-WW D2.3
MAX 220 KIAS **1500**

GATWICK
I-GG/I-WW 110.9
(Ch 46X)
510850N 0001120W
212

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

5 0 5 10NM
Scale 1:500 000

AVERAGE TRACK MILEAGE TO **LAM VOR**	
LAM 6M/6V	56

LAM 6M/6V RWY 26L/R†	Straight ahead until **I-WW** D2.3 (**1500** or above, MAX 220KIAS), then turn right to intercept **DET VOR** R259 by **DET** D31. (**3200** or above, MAX 220KIAS). Crossing **DET** D29 (**4000** or below, MAX 250KIAS). Crossing **DET** D15.4 (**ACORN**) at **5000**. At **DET** D10.5 turn left to intercept **LAM VOR** R157 to **LAM VOR**. Crossing **LAM** D15 at **5000**. Crossing **LAM** D10 at **6000**. Crossing **LAM VOR** at **6000**.	N57, UN57, L10, (N601, UN601 via **BPK**).

OBSTACLE CLEARANCE
† RWY 26R: Maintain minimum 5.0% climb gradient to 703 QNH (500 QFE).
† RWY 26L: Maintain minimum 4.8% climb gradient to 703 QNH (500 QFE).

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Close-in obstacles exist for RWY 26 departures. See Aerodrome Obstacle Chart and EGKK AD 2.10 Aerodrome Obstacles.
3 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
4 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
5 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
6 Adhere to maximum speed limits where specified by DME fixes.
7 Maximum 250KIAS below FL100 unless otherwise authorised by ATC.
8 SID for RWY 26R is identical to those for RWY 26L. RWY code V is allocated to 26R.
9 LAM 6M/6V: In order to alleviate airspace congestion pilots may be offered TIGER 3M/3V SID at a late stage of taxiing. Pilots unable to accept TIGER SID when offered must inform ATC and will be allocated LAM 6M/6V.
10 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
11 Expect first CPDLC Data Link Authority to be EGTT.

000 30W 000 00 000 30E

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L/R
TIGER 3M 3V DAGGA 1M 1V

TRANSITION ALTITUDE
6000
AREA MNM ALT (x100)
24

APP	118.950*	GATWICK DIRECTOR
TWR	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

000°00 000°30E 001°00E 5200N 5130N 5100N 5030N

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

DAGGA
514919N 0004739E
CLN R263.2/D13.2
DET R013.0/D32.0

CLACTON
CLN 114.55D
(Ch 92Y)
515055N 0010851E
100

LAMBOURNE
LAM 115.60D
(Ch 103X)
513846N 0000906E
200

DETLING
DET 117.30D
(Ch 120X)
511814N 0003550E
645

GATWICK
I-GG/I-WW 110.9D
(Ch 46X)
510850N 0001120W
212

MAYFIELD
MAY 117.90D
(Ch 126X)
510102N 0000658E
360

TIGER
510402N 0002622E
MAY R076.1/D12.6

CLN R263 (083°)
DAGGA 1M 1V 13
DAGGA 1M 1V 32
TIGER 3M 3V 39
DET R013
LAM R157 (337°)
DET R193
DAGGA 1M 1V TIGER 3M 3V 13
MAY R283 (103°)
MAY R076
257°
I-WW D2.3
MAY D13 22
MAY D9 3000

D139 1500 (OCNL 2000) SFC
D138B 5000 SFC
D138C 6000 SFC
D138A 6000 (OCNL 60000) SFC
D138D 13000 (OCNL 60000) SFC
D136 13000 SFC
R157 1400 SFC
R160 UNL SFC
R158 1400 SFC
R159 1400 SFC
R107 2000 SFC
D141 3200 SFC
D044 4000 SFC
R063 2000 SFC

WARNING
No turns below 703 QNH (500 QFE).

WARNING
Due to interaction with other routes do not climb above **5000** unless cleared by ATC.

AVERAGE TRACK MILEAGE TO **TIGER**	
TIGER 3M/3V	35
DAGGA 1M/1V	35

5 0 5 10NM
Scale 1:750 000

TIGER 3M/3V RWY 26L/R†	Straight ahead until **I-WW** D2.3, then turn left to intercept **MAY VOR** R283 by **MAY** D13. Crossing **MAY** D9 at **3000** or above. At **MAY VOR** turn left onto **MAY VOR** R076 to **TIGER** (**MAY VOR** R076/D13). Crossing **MAY VOR** at **5000**. Crossing **TIGER** at **5000**. At **TIGER** turn left onto **LAM VOR** R157 to **LAM VOR**.	**LAM VOR**; N57/UN57, L10, N601/UN601.
DAGGA 1M/1V RWY 26L/R†	Straight ahead until **I-WW** D2.3, then turn left to intercept **MAY VOR** R283 by **MAY** D13. Crossing **MAY** D9 at **3000** or above. At **MAY VOR** turn left onto **MAY VOR** R076 to **TIGER** (**MAY VOR** R076/D13). Crossing **MAY VOR** at **5000**. Crossing **TIGER** at **5000**. At **TIGER** turn left onto **DET VOR** R193 to **DET VOR - DAGGA - CLN VOR**.	**CLN VOR**; L620 eastbound.

OBSTACLE CLEARANCE
† RWY 26R: Owing to proximity of a 30FT high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWY 26L and 26R are identical. RWY codes M and V are allocated respectively.
7 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
8 **TIGER and DAGGA SIDs are tactical routeings allocated by ATC to alleviate airspace congestion and may be offered at a late stage of taxiing to aircraft normally allocated LAM or CLN SIDs. Pilots unable to accept TIGER and DAGGA SIDs when offered must inform ATC and will be re-allocated LAM or CLN SID as appropriate. TIGER and DAGGA SIDs should not be used for flight planning purposes.**
9 For TIGER 3M and 3V departures expect first CPDLC Data Link Authority to be EGTT.

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS.

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS.
AERO INFO DATE 29 MAY 20

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L/R
WIZAD 4M 4V

WIZAD 4M/4V RWY 26L/R† Straight ahead until **I-WW** D2.3, then turn left to intercept **MAY VOR** R283 by **MAY** D13. Crossing **MAY** D9 at **3000** or above. At **MAY VOR** turn left onto **DVR VOR** R260 to **WIZAD**. Crossing **MAY VOR** at **5000** or above. Crossing **DVR** D35 at **6000**. Crossing **WIZAD** at **6000**. via WIZAD; L9, L10 eastbound.

OBSTACLE CLEARANCE
† RWY 26R: Owing to proximity of a 30FT high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'Gatwick Director'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWYs 26L and 26R are identical. RWY codes M and V are allocated respectively.
7 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
8 **WIZAD SID is a tactical routeing allocated by ATC to alleviate airspace congestion and may be offered at a late stage of taxiing to aircraft normally allocated DVR SID. Pilots unable to accept WIZAD SID when offered must inform ATC and will be re-allocated DVR SID. WIZAD SID should not be used for flight planning purposes.**

AVERAGE TRACK MILEAGE TO **WIZAD**
WIZAD 4M/4V 55

WARNING
Due to interaction with other routes do not climb above **6000** unless cleared by ATC.

GATWICK
I-GG/I-WW 110.9ᴰ
(Ch 46X)
510850N 0001120W
212

WARNING
No turns below 703 QNH (500 QFE).

257° I-WW D2.3

MAY D13 **MAY R283** (103°)

MAY D9 **3000**

WIZAD 4M 4V 23

5000

DVR R260 (080°)

6000 DVR D35

WIZAD 4M 4V 32

6000

WIZAD
510700N 0005711E
DVR R259.9/D15.6
MAY R079.0/D32.2

DOVER
DVR 114.95ᴰ
(Ch 96Y)
510945N 0012133E
315

R160 UNL SFC
R157 1400 SFC
R158 1400 SFC
R159 1400 SFC
R107 2000 SFC
D141 3200 SFC
D044 4000 SFC
R063 2000 SFC

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

5 0 5 10NM
Scale 1:500 000

APP	118.950	GATWICK DIRECTOR
TWR	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

TRANSITION ALTITUDE **6000**

AREA MNM ALT (x100) **24**

CHANGE (2/21): CLN 1M 1V 5P 5W TRUNCATED AND REDESIGNATED FRANE 1M 1V 1P 1W. BIG VOR/DME ELEVATION.
AERO INFO DATE 11 DEC 20

GENERAL INFORMATION

1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Close-in obstacles exist for RWY 26 departures. See Aerodrome Obstacle Chart and EGKK AD 2.10 Aerodrome Obstacles.
3 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
4 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
5 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
6 Adhere to maximum speed limits where specified by DME fixes.
7 Maximum 250KIAS below FL100 unless otherwise authorised by ATC.
8 SIDs for RWYs 26R and 08L are identical to those for RWYs 26L and 08R respectively. RWY codes V and W are allocated to 26R and 08L.
9 FRANE 1M/1V: In order to alleviate airspace congestion pilots may be offered DAGGA 1M/1V SID at a late stage of taxiing. Pilots unable to accept DAGGA SID when offered must inform ATC and will be allocated FRANE 1M/1V.
10 For RCF Procedures see AD 2.22.3a.

ACC	120.530	LONDON CONTROL
TWR	121.955	GATWICK DELIVERY
	124.230, 134.230*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

TRANSITION ALTITUDE 6000
AREA MNM ALT (x100) 24

5 0 5 10NM
Scale 1:400 000

WARNING - STEPPED CLIMB
Due to interaction with other routes pilots must ensure strict compliance with the specified climb profile unless cleared by ATC.

WARNING
No turns below 703 QNH (500 QFE).

VAR 0.5°E - 2022
N
Annual Rate of Change 0.19°E

BIGGIN
BIG 115.10D (Ch 98X)
511951N 0000205E
589

ACORN
511519N 0001146E
BIG R127.1/D7.6
LAM R176.1/D23.5
DET R259.0/D15.4

CLACTON
CLN 114.55D (Ch 92Y)
515055N 0010851E
100

FRANE
512306N 0003739E
DET R013.0/D5.0
CLN R215.0/D34.0

DETLING
DET 117.30D (Ch 120X)
511814N 0003550E
645

DOVER
DVR 114.95D (Ch 96Y)
510945N 0012133E
315

TUNBY
511008N 0001929E
DVR R270.9/D39.1
BIG R132.0/D14.6
DET R231.6/D13.1

GATWICK
I-GG/I-WW 110.9D (Ch 46X)
510850N 0001120W
212

D136 13000 SFC
D138D 13000 (OCNL 60000) SFC

MAX 250KIAS 4000
MAX 220KIAS 3200
MAX 220KIAS 1500

AVERAGE TRACK MILEAGE TO DET VOR
FRANE 1M/1V 43
FRANE 1P/1W 36

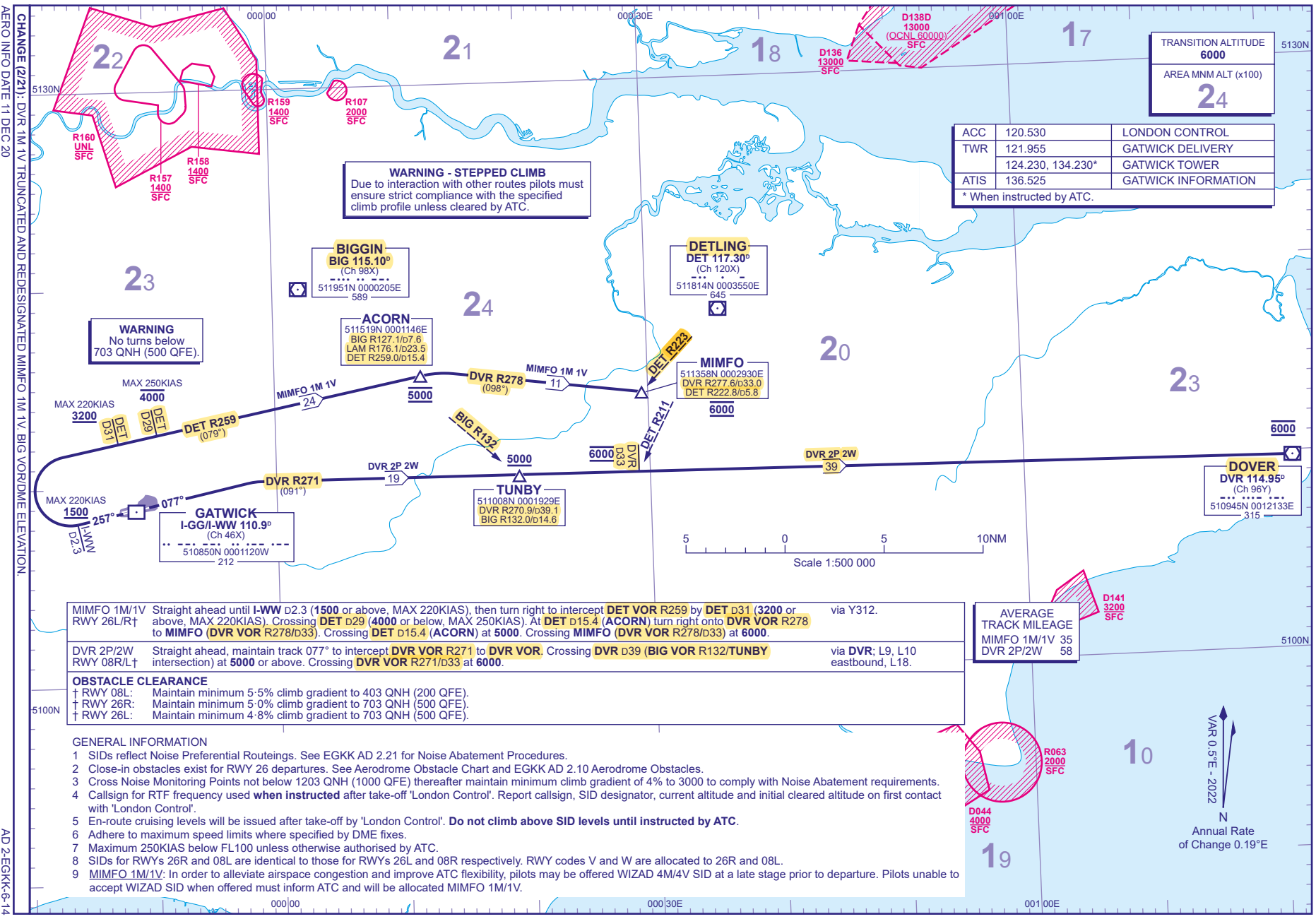
FRANE 1M/1V RWY 26L/R†	Straight ahead until **I-WW** D2.3 (**1500** or above. MAX 220KIAS), then turn right to intercept **DET VOR** R259 by **DET** D31 (**3200** or above, MAX 220KIAS). Crossing **DET** D29 (**4000** or below, MAX 250 KIAS). At **DET** D15.4 (**ACORN**) turn right onto **DVR VOR** R278. Crossing **DET** D15.4 (**ACORN**) at **5000**. At **DVR** D31.9 turn left to **DET VOR**.Crossing **DET VOR** at **5000**. At **DET VOR** turn right onto **DET VOR** R013 to **FRANE** (**DET VOR** R013/D5). Crossing **FRANE** (**DET VOR** R013/D5) at **6000**. via M604.
FRANE 1P/1W RWY 08R/L†	Straight ahead, maintain track 077° to intercept **DVR VOR** R271. Crossing **DVR** D39 (**TUNBY**) at **5000**. At **DVR** D31 turn left to **DET VOR**. Crossing **DET VOR** at **5000**. At **DET VOR** turn right onto **DET VOR** R013 to **FRANE** (**DET VOR** R013/D5). Crossing **FRANE** (**DET VOR** R013/D5) at **6000**. via M604.

OBSTACLE CLEARANCE
†RWY 08L: Maintain minimum 5.5% climb gradient to 403 QNH (200 QFE).
†RWY 26R: Maintain minimum 5.0% climb gradient to 703 QNH (500 QFE).
†RWY 26L: Maintain minimum 4.8% climb gradient to 703 QNH (500 QFE).

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

CHANGE (2/21): DVR 1M 1V TRUNCATED AND REDESIGNATED MIMFO 1M 1V. BIG VOR/DME ELEVATION.
AERO INFO DATE 11 DEC 20

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET



MIMFO 1M/1V RWY 26L/R†	Straight ahead until **I-WW** D2.3 (**1500** or above, MAX 220KIAS), then turn right to intercept **DET VOR** R259 by **DET** D31 (**3200** or above, MAX 220KIAS). Crossing **DET** D29 (**4000** or below, MAX 250KIAS). At **DET** D15.4 (**ACORN**) turn right onto **DVR VOR** R278 to **MIMFO** (**DVR VOR** R278/D33). Crossing **DET** D15.4 (**ACORN**) at **5000**. Crossing **MIMFO** (**DVR VOR** R278/D33) at **6000**.	via Y312.
DVR 2P/2W RWY 08R/L†	Straight ahead, maintain track 077° to intercept **DVR VOR** R271 to **DVR VOR**. Crossing **DVR** D39 (**BIG VOR** R132/**TUNBY** intersection) at **5000** or above. Crossing **DVR VOR** R271/D33 at **6000**.	via **DVR**; L9, L10 eastbound, L18.

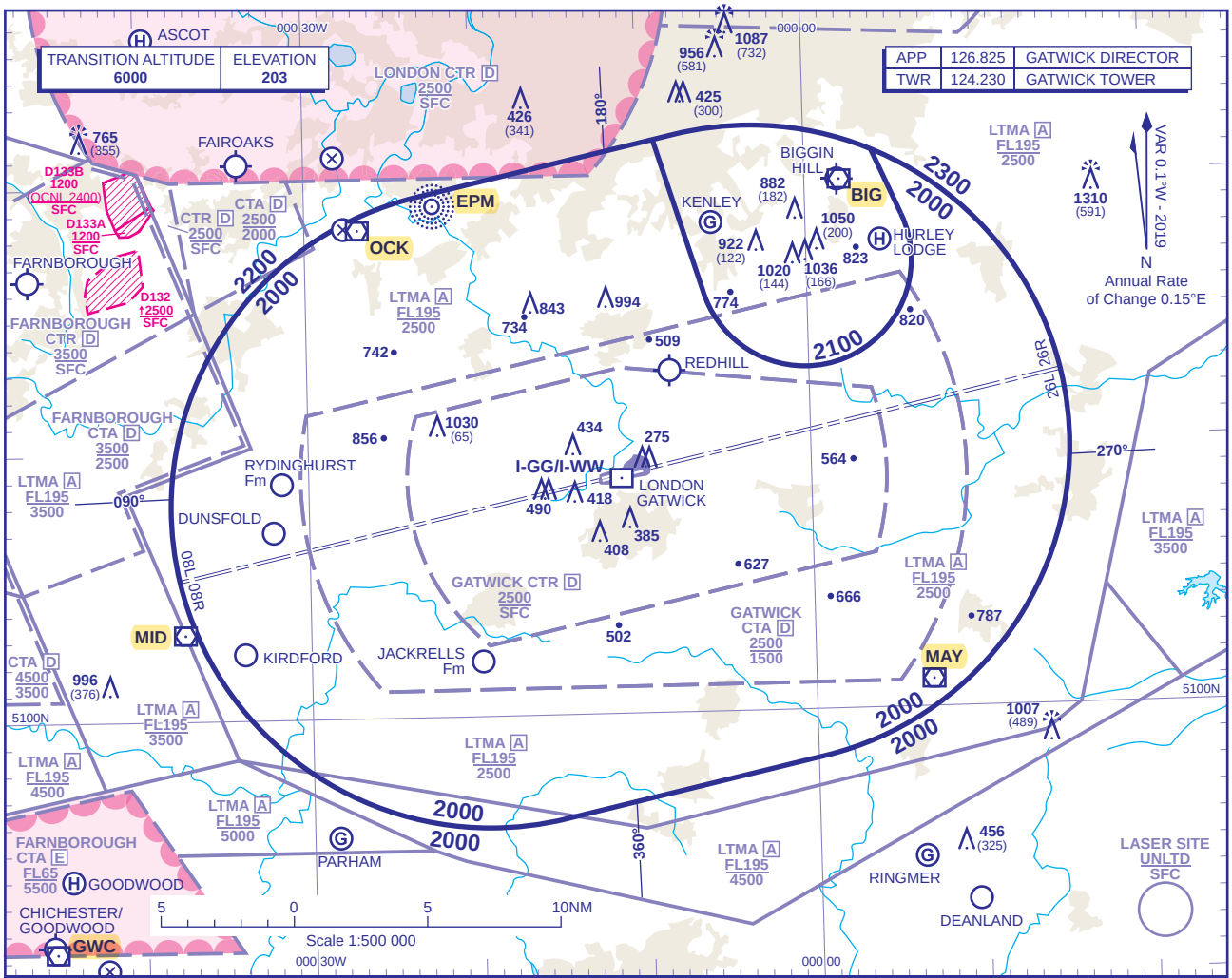
OBSTACLE CLEARANCE
† RWY 08L: Maintain minimum 5·5% climb gradient to 403 QNH (200 QFE).
† RWY 26R: Maintain minimum 5·0% climb gradient to 703 QNH (500 QFE).
† RWY 26L: Maintain minimum 4·8% climb gradient to 703 QNH (500 QFE).

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Close-in obstacles exist for RWY 26 departures. See Aerodrome Obstacle Chart and EGKK AD 2.10 Aerodrome Obstacles.
3 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
4 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
5 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
6 Adhere to maximum speed limits where specified by DME fixes.
7 Maximum 250KIAS below FL100 unless otherwise authorised by ATC.
8 SIDs for RWYs 26R and 08L are identical to those for RWYs 26L and 08R respectively. RWY codes V and W are allocated to 26R and 08L.
9 MIMFO 1M/1V: In order to alleviate airspace congestion and improve ATC flexibility, pilots may be offered WIZAD 4M/4V SID at a late stage prior to departure. Pilots unable to accept WIZAD SID when offered must inform ATC and will be allocated MIMFO 1M/1V.

ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ELEVATIONS IN FEET AMSL **1310**
HEIGHTS IN FEET AGL (591)

LONDON GATWICK



MINIMUM INITIAL ALTITUDE

Within the ATC Surveillance Minimum Altitude area the minimum initial altitude to be allocated by the approach surveillance controller is:

a) **2000** in the sector defined by the lateral limits; 511931N 0002318W - 512129N 0000900W - 511548N 0000613W thence anticlockwise by an arc of a circle radius 4NM centred on 511651N 0000005W to 511829N 0000545E - 512055N 0000403E thence clockwise by an arc of a circle radius 12NM centred on 510957N 0000339W to 505815N 0000023E - 505607N 0001505W thence clockwise by an arc of a circle radius 12NM centred on 510749N 0001910W to 511931N 0002318W.

b) **2100** in the sector defined by the lateral limits; 512129N 0000900W - 512140N 0000742W thence clockwise by an arc of a circle radius 12NM centred on 510957N 0000339W to 512055N 0000403E - 511829N 0000545E thence clockwise by an arc of a circle radius 4NM centred on 511651N 0000005W - 511548N 0000613W - 512129N 0000900W.

OUTSIDE THE DESIGNATED ATC SURVEILLANCE MINIMUM ALTITUDE AREA

The minimum altitude to be allocated by the approach surveillance controller will be either the Minimum Sector Altitude, or **1000** above any fixed obstacles:

a) within 5NM of the aircraft*, and

b) within the sector 15NM ahead of and within 20° either side of the aircraft's track*.

*When the aircraft is within 15NM of the radar antennae, the 5NM in a) and the 15NM in b) may be reduced to 3NM and 10NM respectively.

LOSS OF COMMUNICATION PROCEDURES

Initial Approach

Continue visually or by means of an appropriate approved final approach aid. If not possible proceed at **3000**, or last assigned level if higher, to **MAY VOR**†.

Intermediate and Final Approach

Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to **MAY VOR**†.

†In all cases where the aircraft returns to the holding facility the procedure to be adopted is the Radio Failure Procedure detailed at ENR 1.1.3 or the special procedure for the Gatwick Control Zone detailed at EGKK AD 2.22.

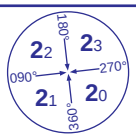
GENERAL INFORMATION

1. Levels shown are based on QNH.
2. Only significant obstacles and dominant spot heights are shown.
3. The minimum levels shown within the ATC Surveillance Minimum Altitude Area are in conformance with the Standard European Rules of the Air - SERA.5015.
4. Minimum Sector Altitudes are based on obstacles and spot heights within 25NM of the Aerodrome Reference Point.
5. Controlled airspace with a base in excess of **5000** or FL55, as appropriate, is not shown.
6. The ATC Surveillance service is provided by Primary and/or Secondary Radar equipment.
7. **This chart may only be used for cross-checking of altitudes assigned while under ATC Surveillance control.**
8. Detailed description of FIR, UIR, CTA and TMA see ENR 2.1.
9. Detailed description of ATS airspace organized at the aerodrome see AD 2.17.

CHANGE (3/20): FARNBOROUGH CTR/CTA ADDED. LTMA UPDATED. R131 WITHDRAWN.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
ILS/DME
RWY 08R
(ACFT CAT A,B,C,D)

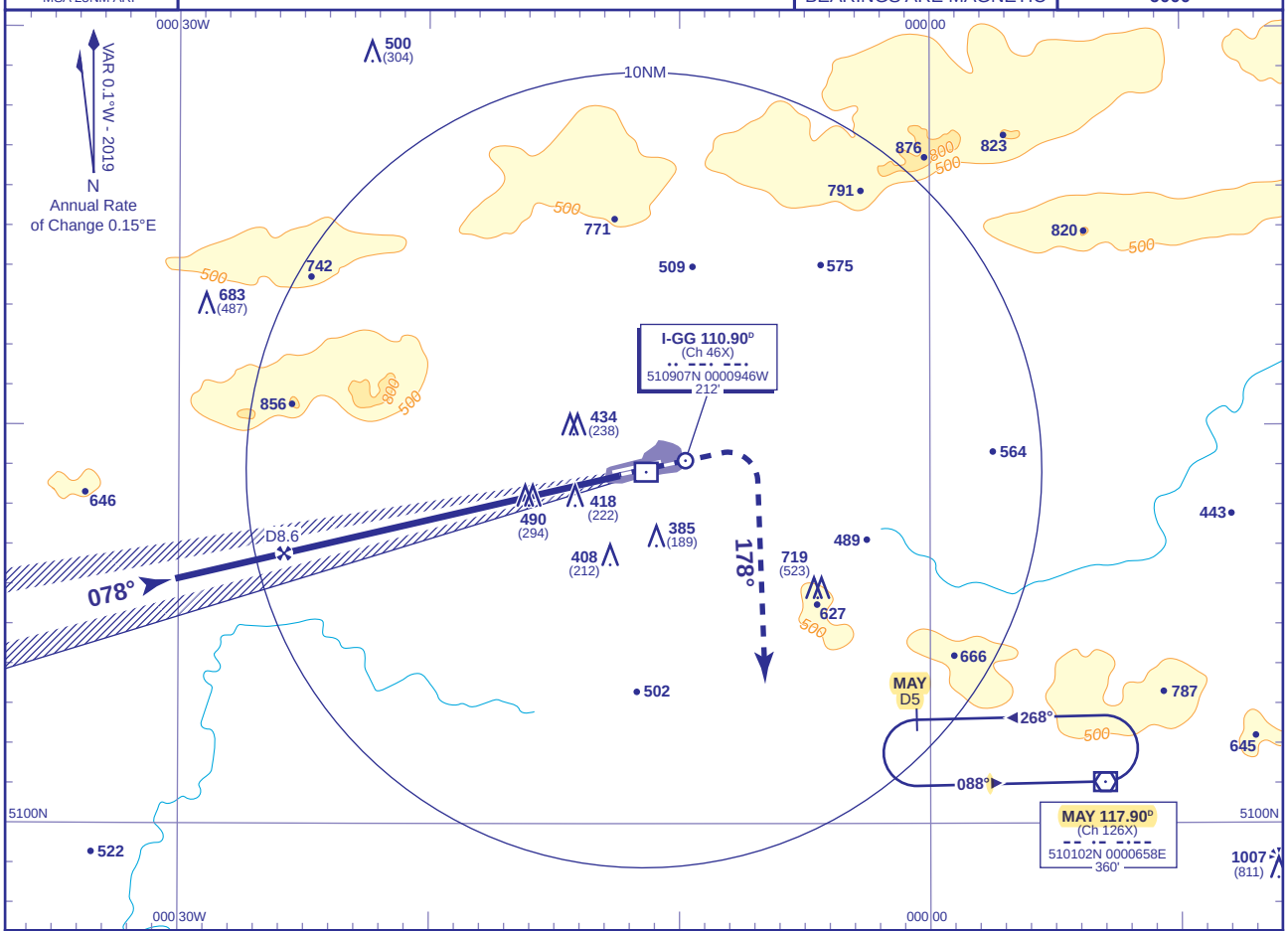


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	196
OBSTACLE ELEVATION	1007 AMSL (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

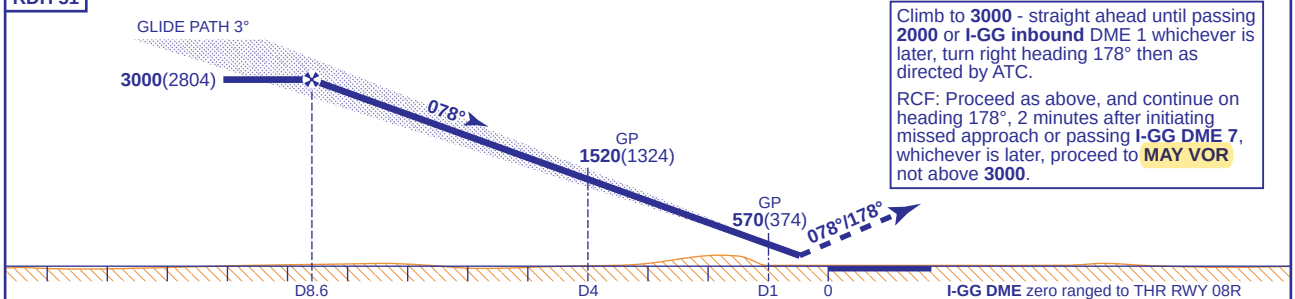
TRANSITION ALTITUDE **6000**



RECOMMENDED PROFILE GLIDE PATH 3°, 320FT/NM

DME I-GG	8	7	6	5	4	3	2
ALT(HGT)	**2800**(2604)	**2480**(2284)	**2160**(1964)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

RDH 51



Climb to **3000** - straight ahead until passing **2000** or **I-GG inbound** DME 1 whichever is later, turn right heading 178° then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D
OCA (OCH)	CAT I	**336**(140)	**345**(149)	**357**(161)	**370**(174)
	CAT II	**244**(48)	**255**(59)	**268**(72)	**280**(84)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

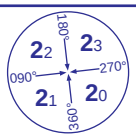
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

FOR AIRCRAFT UNABLE TO RECEIVE DME I-GG :
Equivalent radar ranges will be provided to the aircraft when established on the localiser, approaching the nominal Final Approach Point and 4NM points.

NOTE 1 For arrival and initial approach procedures see AD 2-EGKK-7-7.

CHANGE (7/19): TWR/GROUND FREQUENCIES. I-GG ELEVATION.

LONDON GATWICK
ILS/DME
RWY 26L
(ACFT CAT A,B,C,D)

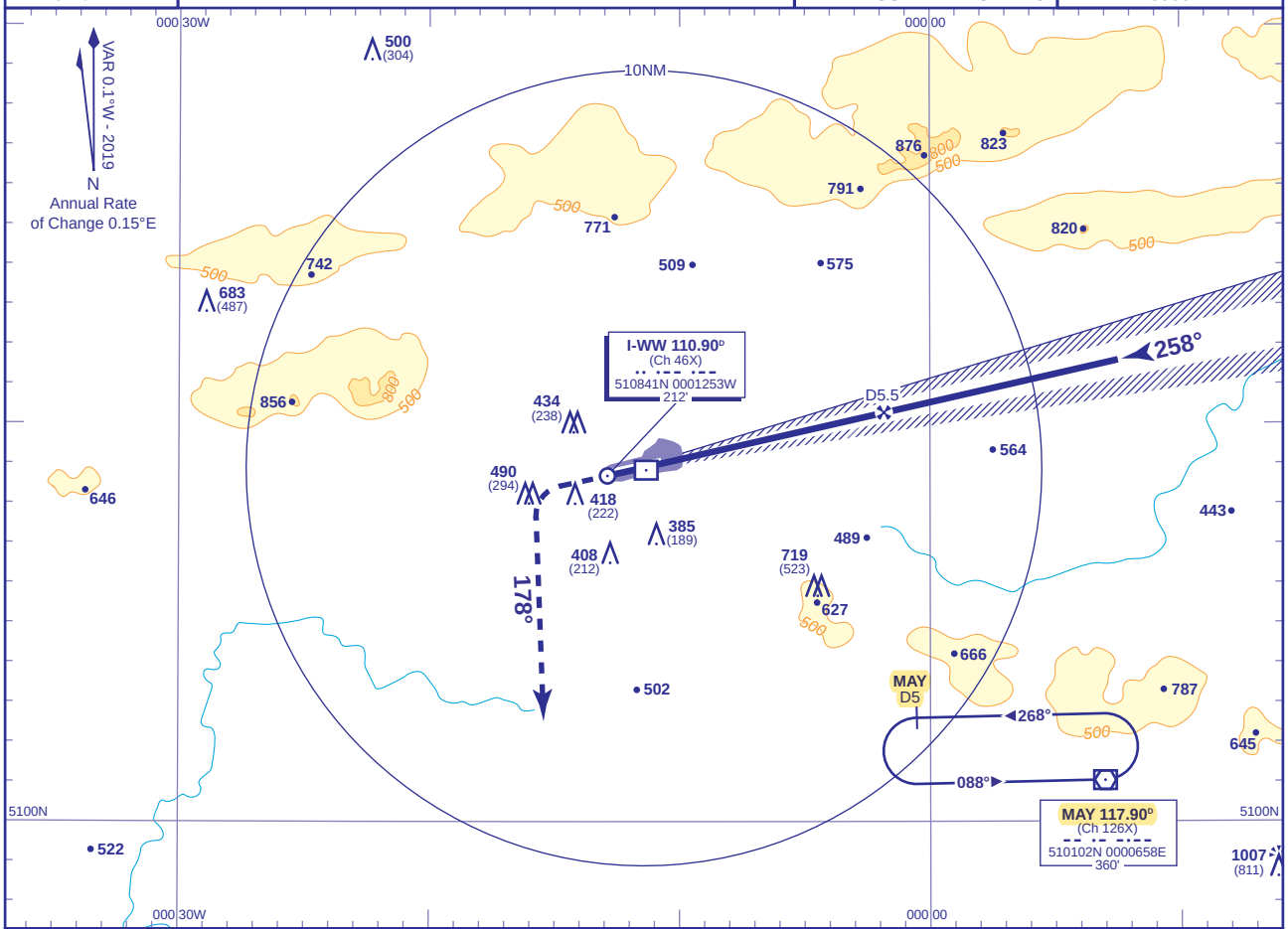


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)
	121.805	GATWICK GROUND
ATIS	136.525	GATWICK INFORMATION

AD ELEVATION	**203**
THR ELEVATION	**196**
OBSTACLE ELEVATION	**1007 AMSL** (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **6000**



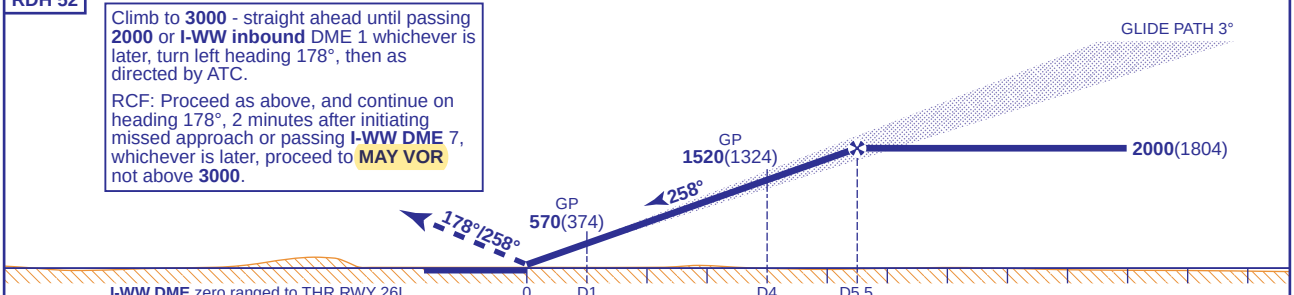
RECOMMENDED PROFILE GLIDE PATH 3°, 320FT/NM

DME I-WW	5	4	3	2
ALT(HGT)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

RDH 52

Climb to **3000** - straight ahead until passing **2000** or **I-WW inbound** DME 1 whichever is later, turn left heading 178°, then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	CAT I	**335**(139)	**344**(148)	**356**(160)	**370**(174)
	CAT II	**245**(49)	**255**(59)	**268**(72)	**281**(85)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

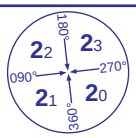
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

FOR AIRCRAFT UNABLE TO RECEIVE DME I-WW :
Equivalent radar ranges will be provided to the aircraft when established on the localiser, approaching the nominal Final Approach Point and 4NM points.

NOTE 1 For arrival and initial approach procedures see AD 2-EGKK-7-8.

CHANGE (7/19): TWR/GROUND FREQUENCIES. I-WW ELEVATION.

LONDON GATWICK
LOC/DME
RWY 08R
(ACFT CAT A,B,C,D)

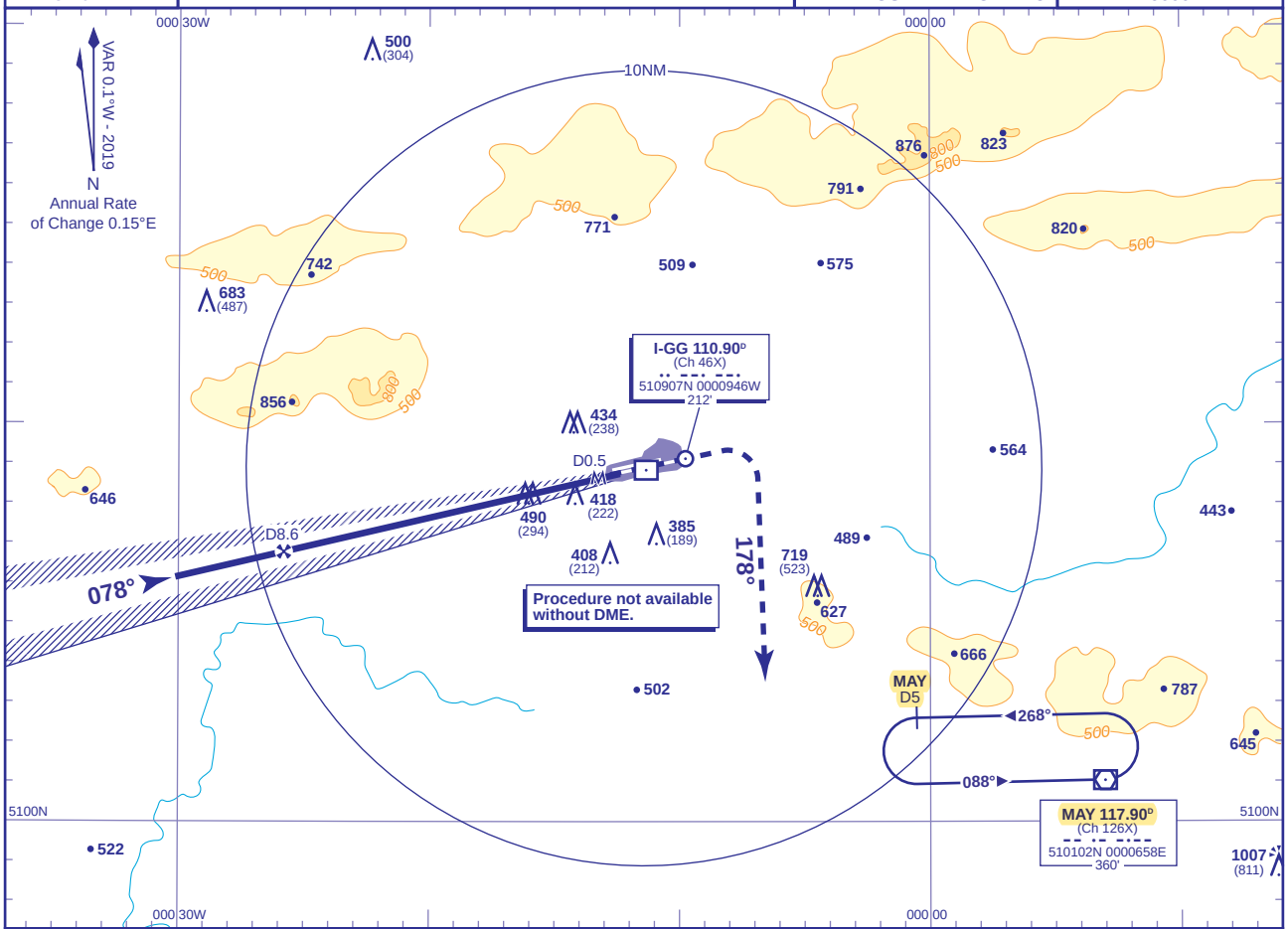


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)
	121.805	GATWICK GROUND
ATIS	136.525	GATWICK INFORMATION

AD ELEVATION	203
THR ELEVATION	196
OBSTACLE ELEVATION	1007 AMSL (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **6000**



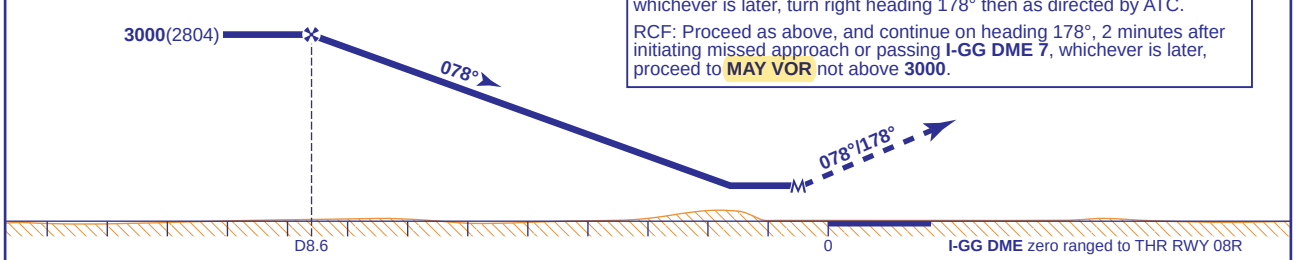
RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

DME I-GG	8	7	6	5	4	3	2
ALT(HGT)	**2800**(2604)	**2480**(2284)	**2160**(1964)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

MAPt I-GG DME 0.5

Climb to **3000** - straight ahead until passing **2000** or **I-GG inbound** DME 1 whichever is later, turn right heading 178° then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**740**(544)	**740**(544)	**740**(544)	**740**(544)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

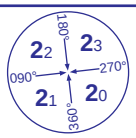
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 For arrival and initial approach procedures see AD 2-EGKK-7-7.

CHANGE (7/19): TWR/GROUND FREQUENCIES. I-GG ELEVATION.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
LOC/DME
RWY 26L
(ACFT CAT A,B,C,D)

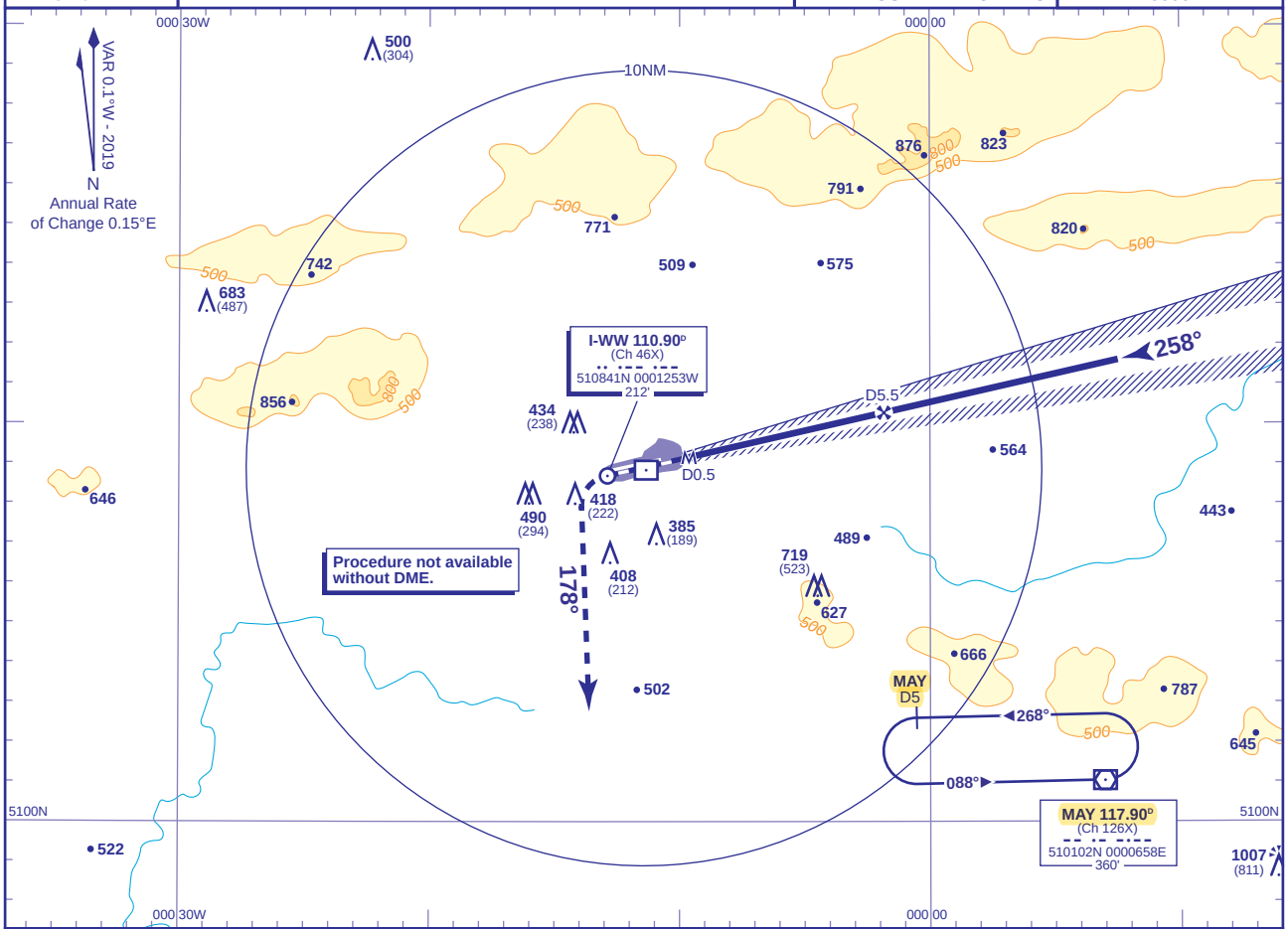


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	**203**
THR ELEVATION	**196**
OBSTACLE ELEVATION	**1007 AMSL** (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **6000**



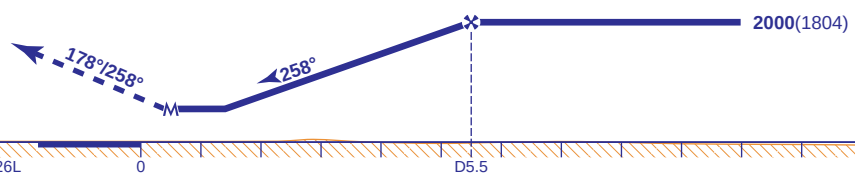
RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

DME I-WW	5	4	3	2
ALT(HGT)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

MAPt I-WW DME 0.5

Climb to **3000** - straight ahead until passing **2000** or **I-WW inbound** DME 1 whichever is later, turn left heading 178°, then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**560**(364)	**560**(364)	**560**(364)	**560**(364)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

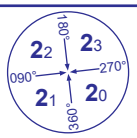
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 For arrival and initial approach procedures see AD 2-EGKK-7-8.

CHANGE (7/19): TWR/GROUND FREQUENCIES. I-WW ELEVATION.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
RNP
RWY 08L
(ACFT CAT A,B,C,D)



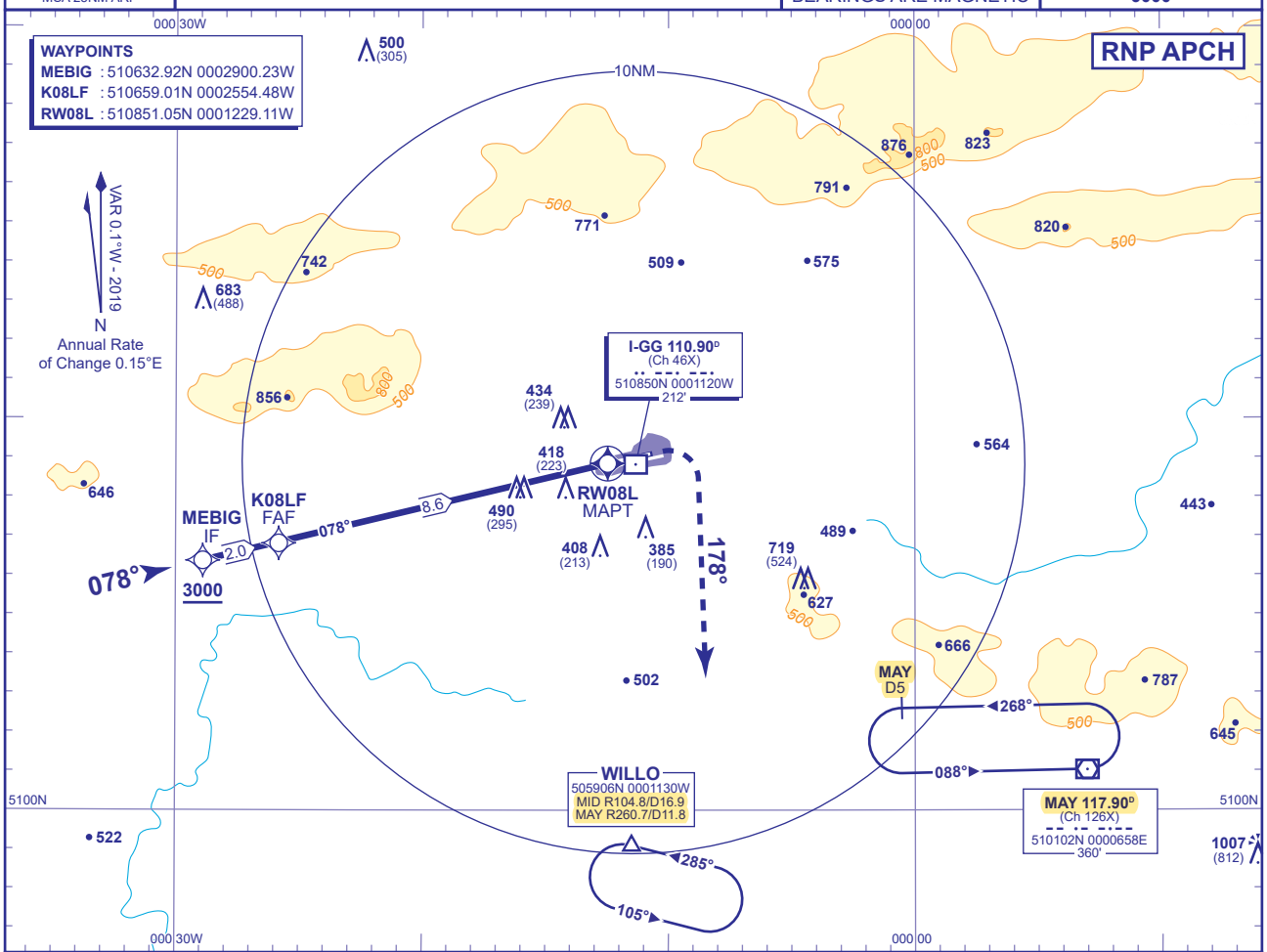
MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	195
OBSTACLE ELEVATION	1007 AMSL (812) (ABOVE THR)
BEARINGS ARE MAGNETIC	

MIN TEMP -10°C

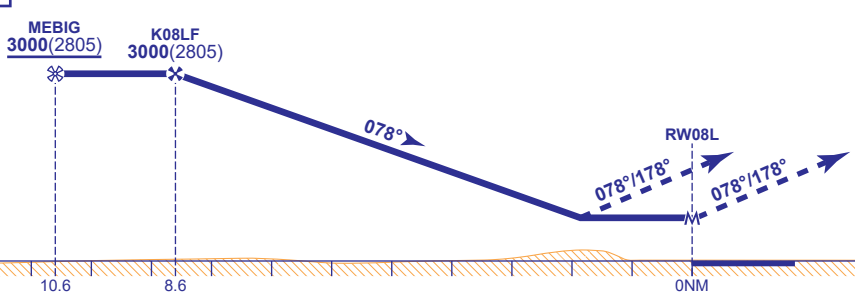
TRANSITION ALTITUDE 6000



RECOMMENDED PROFILE VNAV - VERTICAL PATH ANGLE 3.0° (LNAV 5.24%), 318FT/NM

NM to RW08L	8	7	6	5	4	3	2
ALT(HGT)	**2790**(2595)	**2470**(2275)	**2160**(1965)	**1840**(1645)	**1520**(1325)	**1200**(1005)	**880**(685)

TCH 50



MAPt (LNAV): RW08L

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound **RW08L** whichever is later, turn right heading 178° then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D
OCA (OCH)	LNAV/VNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)
	LNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 Pilots should 'Request RNP Approach' on first contact with Gatwick Director.
2 Aircraft will be radar vectored to MEBIG.
3 In the event of radio communications failure, follow conventional arrival procedures to establish on final approach course.
4 See AD 2-EGKK-8-13 for data coding tables.
5 An early initiation of the missed approach may require pilot intervention with the RNP system in order to comply with the 1NM inbound turn initiation point.
6 The missed approach reverts to conventional navigation after passing **2000**.

CHANGE (11/20): RNP REFERENCES ADDED. K08LF HEIGHT REFERENCES.

LONDON GATWICK
RNP
RWY 08R
(ACFT CAT A,B,C,D)

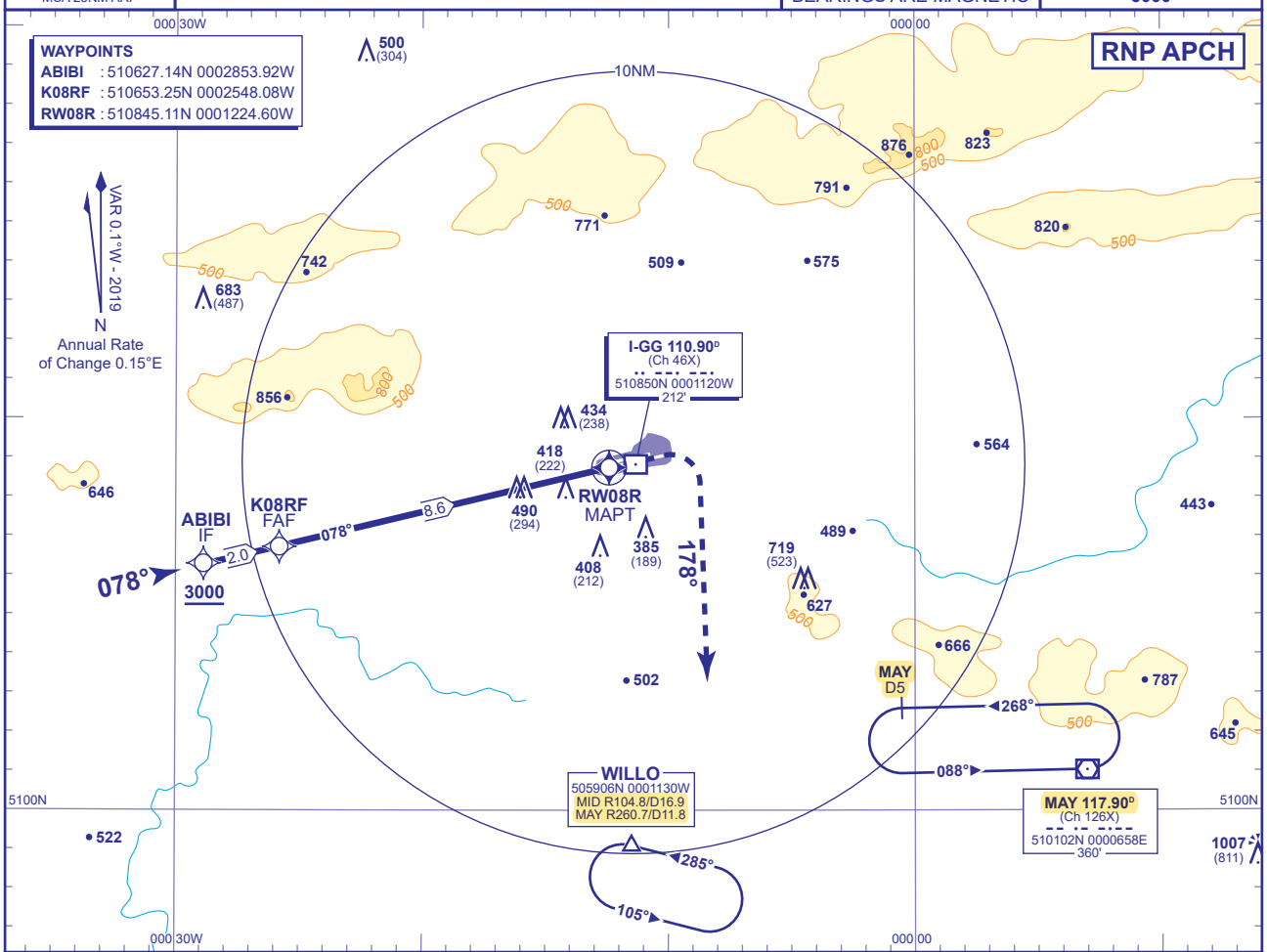
MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	196
OBSTACLE ELEVATION	1007 AMSL (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

MIN TEMP -10°C

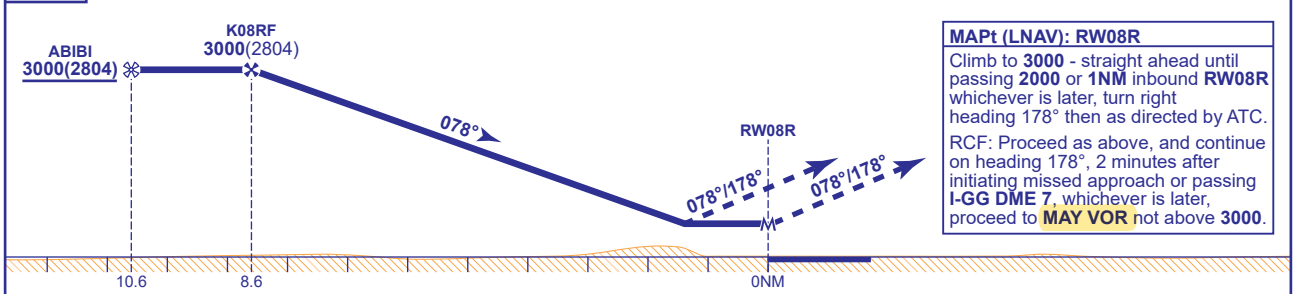
TRANSITION ALTITUDE 6000



RECOMMENDED PROFILE VNAV - VERTICAL PATH ANGLE 3.0° (LNAV 5.24%), 318FT/NM

NM to RW08R	8	7	6	5	4	3	2
ALT(HGT)	**2800**(2604)	**2480**(2284)	**2160**(1964)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

TCH 53



MAPt (LNAV): RW08R

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound **RW08R** whichever is later, turn right heading 178° then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D
OCA (OCH)	LNAV/VNAV	**700**(504)	**700**(504)	**700**(504)	**700**(504)
	LNAV	**740**(544)	**740**(544)	**740**(544)	**740**(544)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 Pilots should 'Request RNP Approach' on first contact with Gatwick Director.
2 Aircraft will be radar vectored to ABIBI.
3 In the event of radio communications failure, follow conventional arrival procedures to establish on final approach course.
4 See AD 2-EGKK-8-13 for data coding tables.
5 An early initiation of the missed approach may require pilot intervention with the RNP system in order to comply with the 1NM inbound turn initiation point.
6 The missed approach reverts to conventional navigation after passing **2000**.

CHANGE (11/20): RNP REFERENCES ADDED. K08RF HEIGHT REFERENCES.

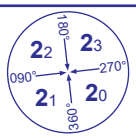
INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK

RNP

RWY 26L

(ACFT CAT A,B,C,D)



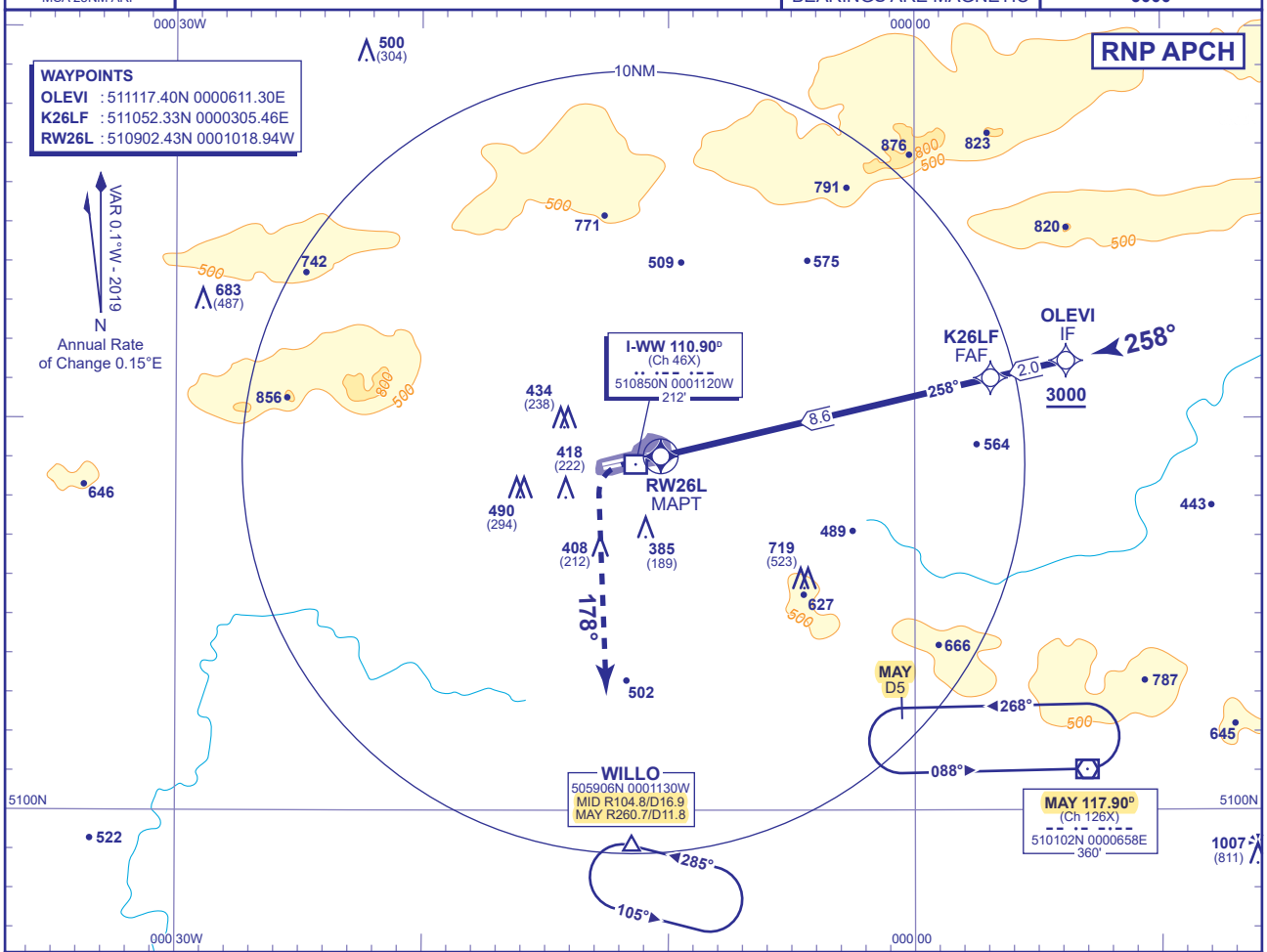
MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	196
OBSTACLE ELEVATION	1007 AMSL (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

MIN TEMP -10°C

TRANSITION ALTITUDE 6000



RECOMMENDED PROFILE VNAV - VERTICAL PATH ANGLE 3.0° (LNAV 5.24%), 318FT/NM.

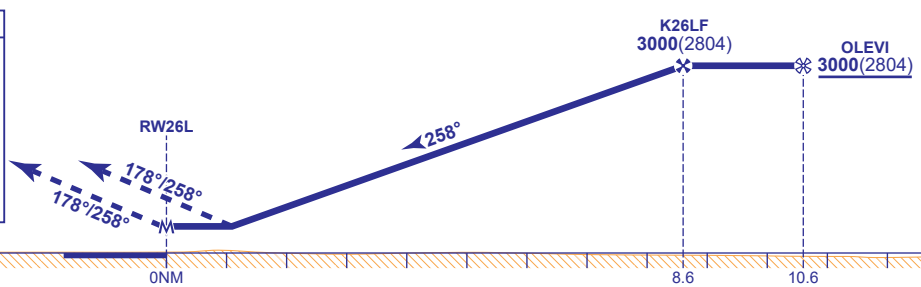
NM to RW26L	8	7	6	5	4	3	2
ALT(HGT)	**2790**(2594)	**2480**(2284)	**2160**(1964)	**1840**(1644)	**1520**(1324)	**1200**(1004)	**880**(684)

TCH 53

MAPt (LNAV): RW26L

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound **RW26L** whichever is later, turn left heading 178°, then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	LNAV/VNAV	**580**(384)	**580**(384)	**580**(384)	**580**(384)
	LNAV	**590**(394)	**590**(394)	**590**(394)	**590**(394)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

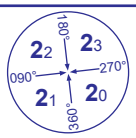
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 Pilots should 'Request RNP Approach' on first contact with Gatwick Director.
2 Aircraft will be radar vectored to OLEVI.
3 In the event of radio communications failure, follow conventional arrival procedures to establish on final approach course.
4 See AD 2-EGKK-8-13 for data coding tables.
5 An early initiation of the missed approach may require pilot intervention with the RNP system in order to comply with the 1NM inbound turn initiation point.
6 The missed approach reverts to conventional navigation after passing **2000**.

CHANGE (11/20): RNP REFERENCES ADDED. K26LF HEIGHT REFERENCES.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
RNP
RWY 26R
(ACFT CAT A,B,C,D)



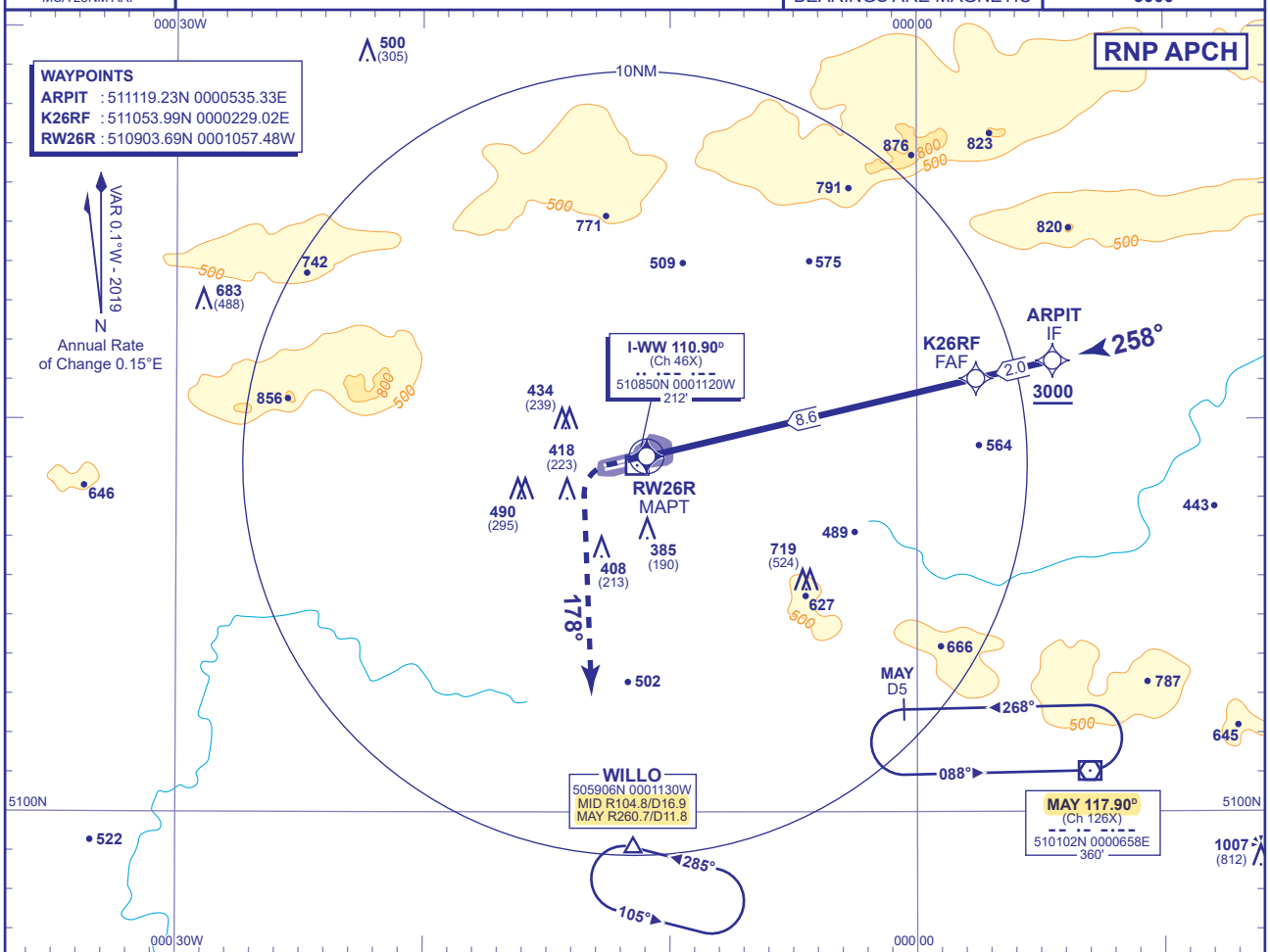
MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	195
OBSTACLE ELEVATION	1007 AMSL (812) (ABOVE THR)
BEARINGS ARE MAGNETIC	

MIN TEMP -10°C

TRANSITION ALTITUDE 6000



RECOMMENDED PROFILE VNAV - VERTICAL PATH ANGLE 3.0° (LNAV Gradient 5.24%), 318FT/NM

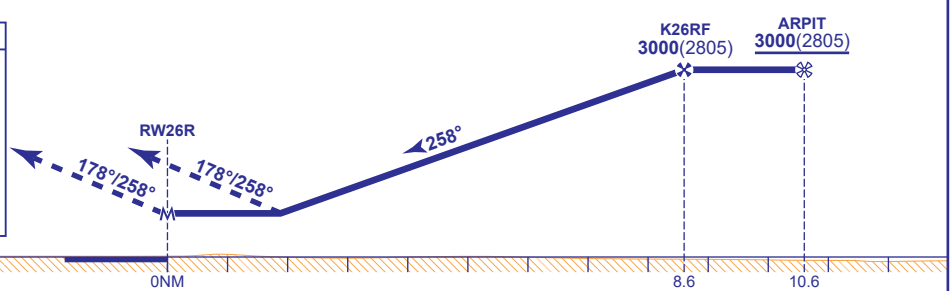
NM to RW26R	8	7	6	5	4	3	2
ALT(HGT)	**2790**(2595)	**2470**(2275)	**2160**(1965)	**1840**(1645)	**1520**(1325)	**1200**(1005)	**880**(685)

TCH 50

MAPt (LNAV): RW26R

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound **RW26R** whichever is later, turn left heading 178°, then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	LNAV/VNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)
	LNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

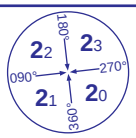
Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

NOTE 1 Pilots should 'Request RNP Approach' on first contact with Gatwick Director.
2 Aircraft will be radar vectored to ARPIT.
3 In the event of radio communications failure, follow conventional arrival procedures to establish on final approach course.
4 See AD 2-EGKK-8-13 for data coding tables.
5 An early initiation of the missed approach may require pilot intervention with the RNP system in order to comply with the 1NM inbound turn initiation point.
6 The missed approach reverts to conventional navigation after passing **2000**.

CHANGE (11/20): RNP REFERENCES ADDED. K26RF HEIGHT REFERENCES.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
SRA RTR 2NM
RWY 08R
(ACFT CAT A,B,C,D)

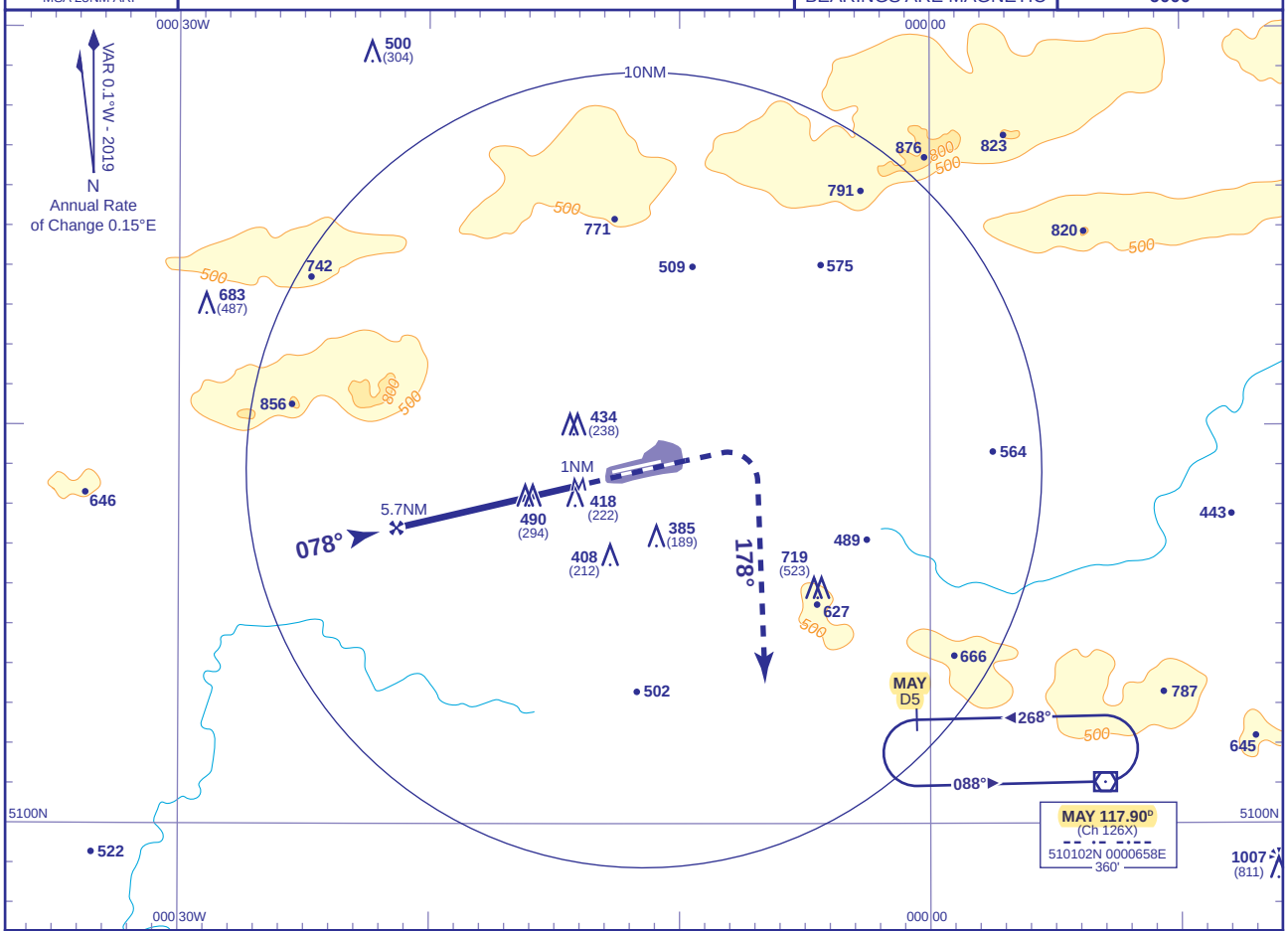


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	196
OBSTACLE ELEVATION	1007 AMSL (811) (ABOVE THR)
BEARINGS ARE MAGNETIC	

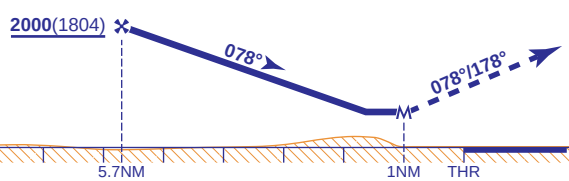
TRANSITION ALTITUDE **6000**



RADAR ADVISORY HEIGHTS Gradient 5.2%, 320FT/NM

NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1780**(1584)	**1460**(1264)	**1150**(954)	**830**(634)

Initial and intermediate approach as directed by radar.



MAPt 1NM after RTR

Climb to **3000** - straight ahead until passing **2000** or **MAPt** whichever is later, turn right heading 178° then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

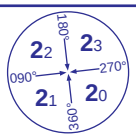
Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**740**(544)	**740**(544)	**740**(544)	**740**(544)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420
RTR 2NM to MAPt	MIN:SEC	0:22	0:26	0:30	0:36	0:45

CHANGE (7/19): TWR/GROUND FREQUENCIES.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
SRA RTR 2NM
RWY 26R
(ACFT CAT A,B,C,D)

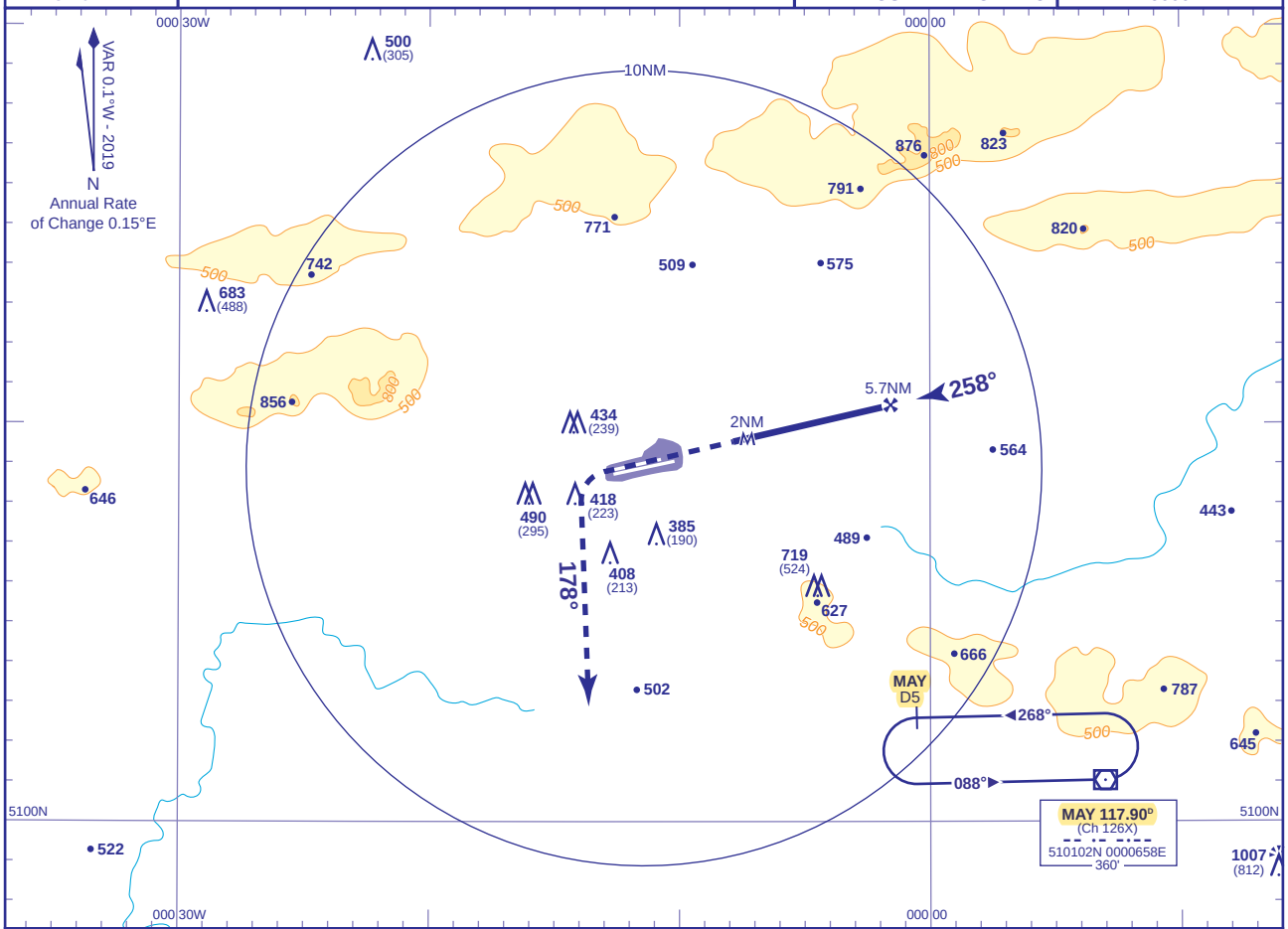


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)
	121.805	GATWICK GROUND
ATIS	136.525	GATWICK INFORMATION

AD ELEVATION	203
THR ELEVATION	195
OBSTACLE ELEVATION	1007 AMSL (812) (ABOVE THR)
BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **6000**



RADAR ADVISORY HEIGHTS Gradient 5.2%, 320FT/NM

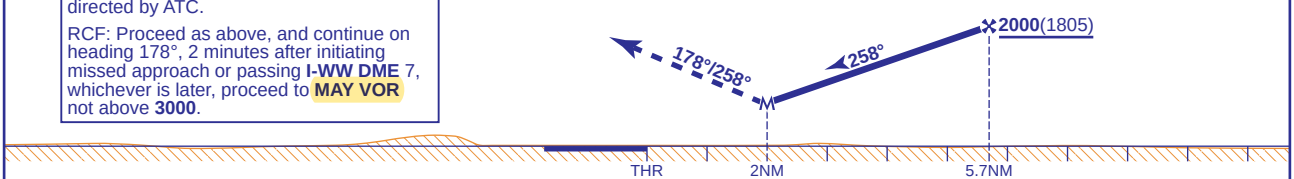
NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1780**(1585)	**1460**(1265)	**1140**(945)	**830**(635)

Initial and intermediate approach as directed by radar.

MAPt RTR 2NM

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound to **THR** whichever is later, turn left heading 178°, then as directed by ATC.

RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



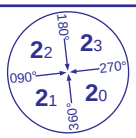
Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**830**(635)	**830**(635)	**830**(635)	**830**(635)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420
MAPt to 1NM inbound THR	MIN:SEC	0:22	0:26	0:30	0:36	0:45

CHANGE (7/19): TWR/GROUND FREQUENCIES.

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
SRA RTR 2NM
RWY 08L
(ACFT CAT A,B,C,D)

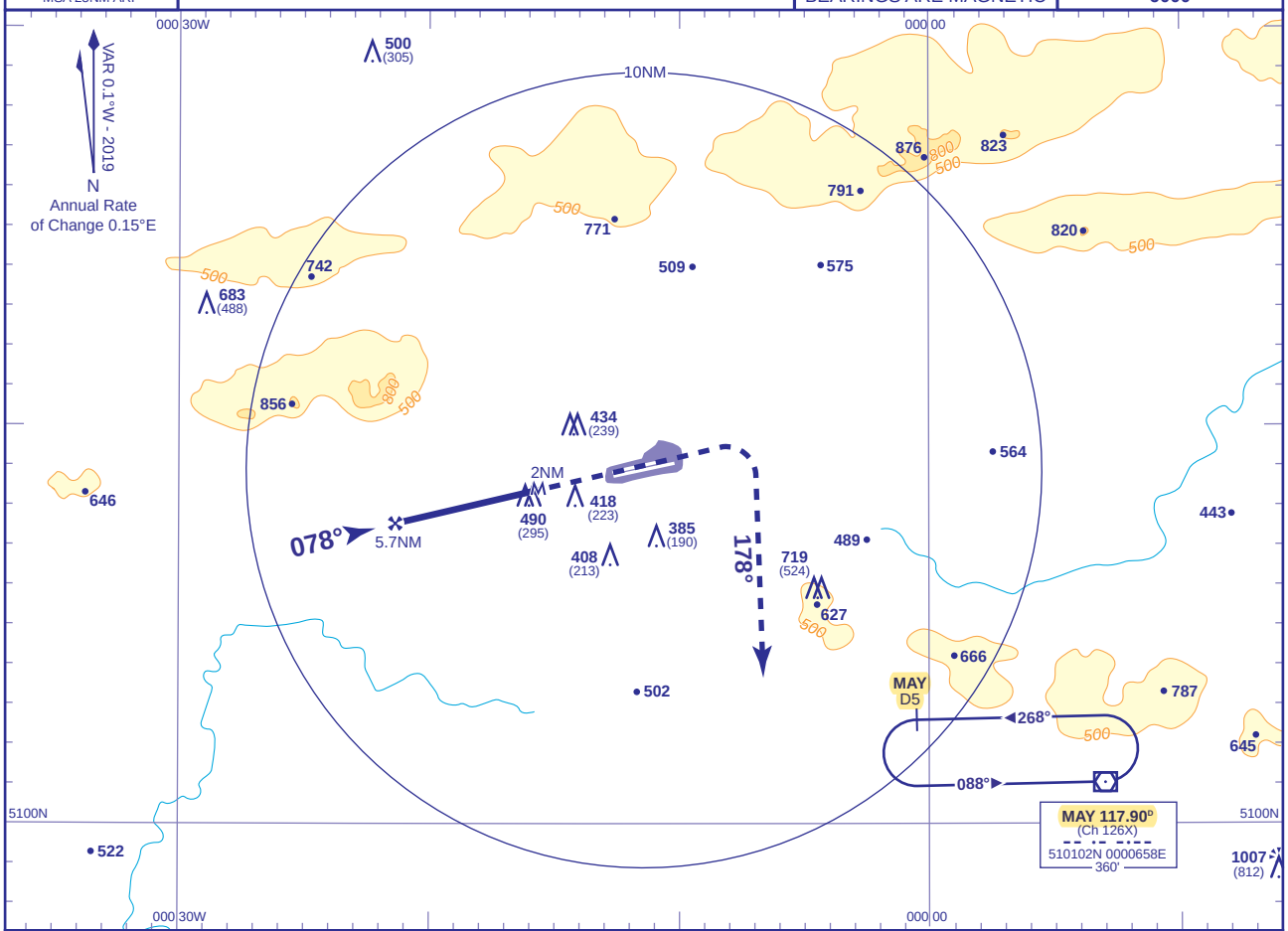


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	
	121.805	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	203
THR ELEVATION	195
OBSTACLE ELEVATION	1007 AMSL (812) (ABOVE THR)
BEARINGS ARE MAGNETIC	

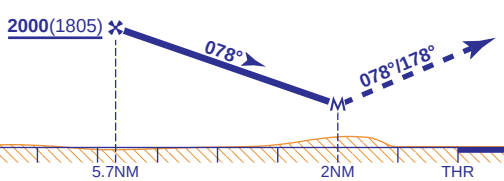
TRANSITION ALTITUDE **6000**



RADAR ADVISORY HEIGHTS Gradient 5.2%, 320FT/NM

NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1780**(1585)	**1460**(1265)	**1140**(945)	**830**(635)

Initial and intermediate approach as directed by radar.



MAPt RTR 2NM

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound to **THR** whichever is later, turn right heading 178° then as directed by ATC.

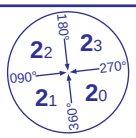
RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D	Rate of descent	G/S KT	160	140	120	100	80
OCA (OCH)	Procedure	**830**(635)	**830**(635)	**830**(635)	**830**(635)		FT/MIN	840	740	630	530	420
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)	MAPT to 1NM inbound THR	MIN:SEC	0:22	0:26	0:30	0:36	0:45

CHANGE (7/19): TWR/GROUND FREQUENCIES.

INSTRUMENT APPROACH CHART - ICAO

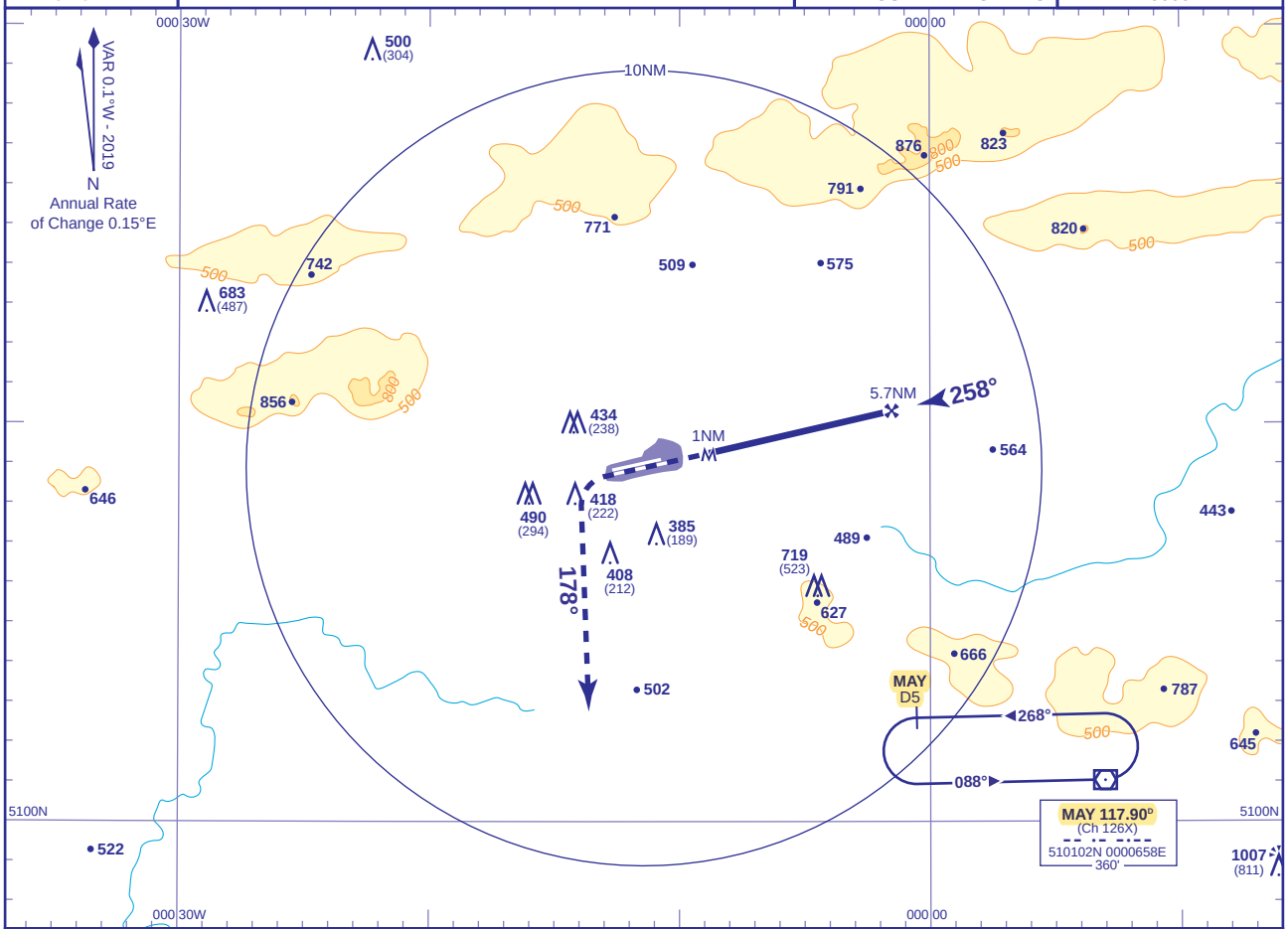
LONDON GATWICK
SRA RTR 2NM
RWY 26L
(ACFT CAT A,B,C,D)



MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	AD ELEVATION	203
TWR	124.230, 134.230, 121.500*	GATWICK TOWER (*Emergency)	THR ELEVATION	196
	121.805	GATWICK GROUND	OBSTACLE ELEVATION 1007 AMSL (811) (ABOVE THR)	
ATIS	136.525	GATWICK INFORMATION	BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **6000**



RADAR ADVISORY HEIGHTS Gradient 5.2%, 320FT/NM

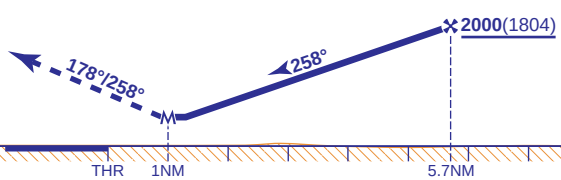
NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1780**(1584)	**1460**(1264)	**1150**(954)	**830**(634)

Initial and intermediate approach as directed by radar.

MAPt 1NM after RTR

Climb to **3000** - straight ahead until passing **2000** or **MAPt** whichever is later, turn left heading 178°, then as directed by ATC.

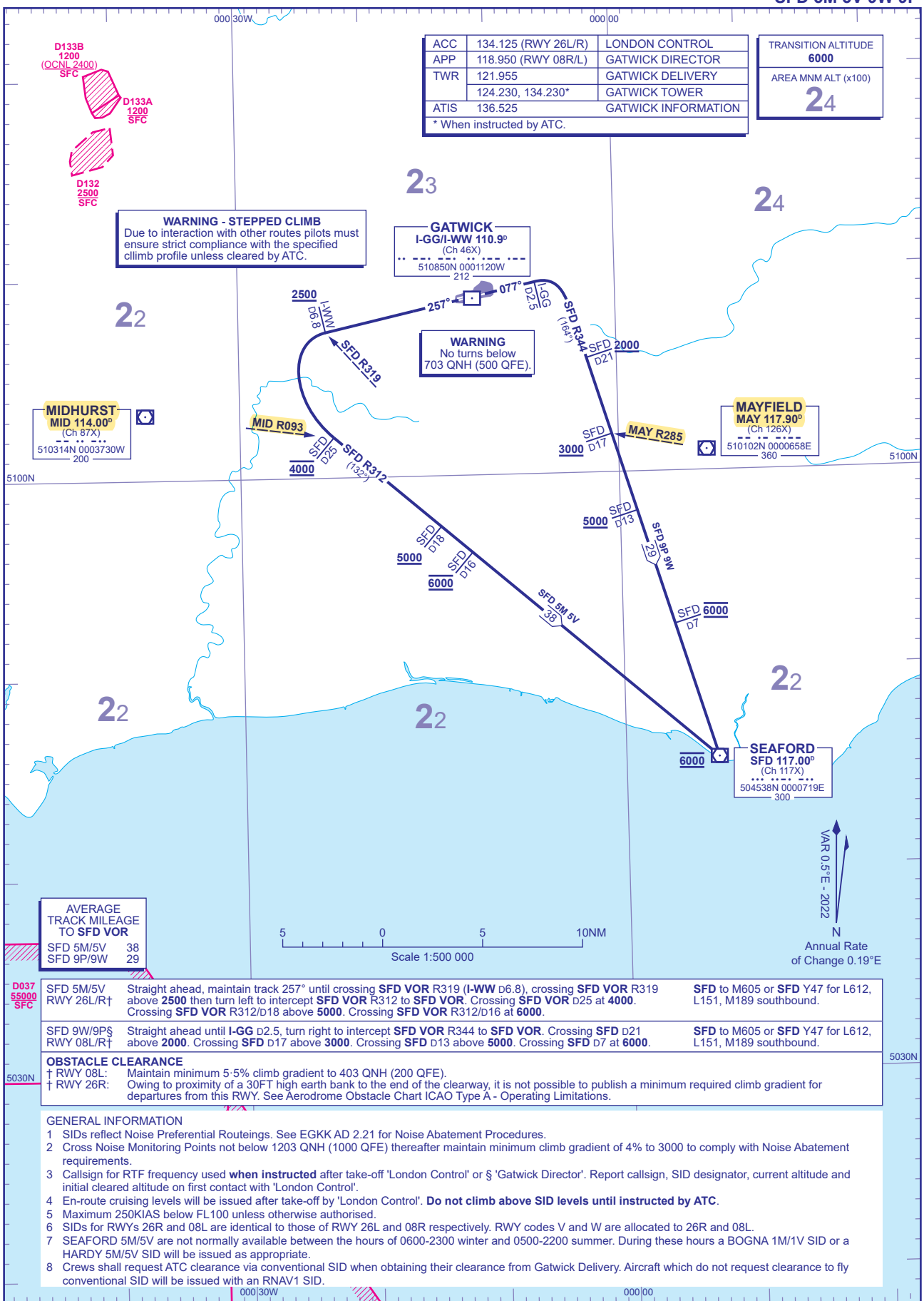
RCF: Proceed as above, and continue on heading 178°, 2 minutes after initiating missed approach or passing **I-WW DME** 7, whichever is later, proceed to **MAY VOR** not above **3000**.



Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**680**(484)	**680**(484)	**680**(484)	**680**(484)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420
RTR 2NM to MAPt	MIN:SEC	0:22	0:26	0:30	0:36	0:45

CHANGE (7/19): TWR/GROUND FREQUENCIES.



AVERAGE TRACK MILEAGE TO **SFD VOR**	
SFD 5M/5V	38
SFD 9P/9W	29

D037 55000 SFC SFD 5M/5V RWY 26L/R†	Straight ahead, maintain track 257° until crossing **SFD VOR** R319 (**I-WW** D6.8), crossing **SFD VOR** R319 above **2500** then turn left to intercept **SFD VOR** R312 to **SFD VOR**. Crossing **SFD VOR** D25 at **4000**. Crossing **SFD VOR** R312/D18 above **5000**. Crossing **SFD VOR** R312/D16 at **6000**.	**SFD** to M605 or **SFD** Y47 for L612, L151, M189 southbound.
SFD 9W/9P§ RWY 08L/R†	Straight ahead until **I-GG** D2.5, turn right to intercept **SFD VOR** R344 to **SFD VOR**. Crossing **SFD** D21 above **2000**. Crossing **SFD** D17 above **3000**. Crossing **SFD** D13 above **5000**. Crossing **SFD** D7 at **6000**.	**SFD** to M605 or **SFD** Y47 for L612, L151, M189 southbound.

OBSTACLE CLEARANCE
† RWY 08L: Maintain minimum 5·5% climb gradient to 403 QNH (200 QFE).
† RWY 26R: Owing to proximity of a 30FT high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control' or § 'Gatwick Director'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWYs 26R and 08L are identical to those of RWY 26L and 08R respectively. RWY codes V and W are allocated to 26R and 08L.
7 SEAFORD 5M/5V are not normally available between the hours of 0600-2300 winter and 0500-2200 summer. During these hours a BOGNA 1M/1V SID or a HARDY 5M/5V SID will be issued as appropriate.
8 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.

CHANGE (9/20): MAG VAR. MAG TRACKS/BEARINGS. MID VOR RECALIBARATED.

4.6 Radio Failure

In accordance with the published UK radio communications failure procedures as published in the UK AIP, the following procedures should be adopted:

When airborne, should an aircraft experience a complete radio communications failure after acknowledging an instruction to deviate from an NPR, the pilot will:

- Select Mode A code 7600, with Mode C
- Continue the agreed heading for a period of 2 minutes, then turn to intercept the radial of the SID given as the original clearance
- Climb to maintain an altitude of 3000 ft Gatwick QNH until intercepting the SID radial, then climb to follow the published climb profile
- In the case of NOVMA/SAM SID departures deviating from the NPR to the south from 26L/R, it can be expected that an aircraft will follow the agreed heading for a period of 2 minutes climbing to maintain altitude 3000 ft Gatwick QNH, and then turn onto a direct track to MID VOR as this is the next waypoint en-route, climbing to maintain an altitude of 4000 ft Gatwick QNH

5.11.1 Missed Approach Procedures

Runway 26L/R

Climb to 3000' - straight ahead until passing 2000' or I-WW inbound DME 1 whichever is later, turn left heading 180°, then as directed by ATC.

Radio Communication Failure: Proceed as above and continue on heading 180°, 2 minutes after initiating missed approach or passing I-WW DME 7, whichever is later, proceed to MAY VOR not above 3000'.

Runway 08R/L

Climb to 3000' – straight ahead until passing 2000' or I-GG inbound DME 1 whichever is later, turn right heading 180°, then as directed by ATC.

Radio Communication Failure: Proceed as above and continue on heading 180°, 2 minutes after initiating missed approach or passing I-GG DME 7, whichever is later, proceed to MAY VOR not above 3000'.

5.11.2 Missed Approach - RNP

The missed approach procedure for RNP approaches are detailed on the approach charts in the UK AIP. The track mimics the DME based procedure detailed above but does not rely on ground-based equipment.

Runway 26L/R

Climb to 3000' - straight ahead until passing 2000' or 1NM inbound RW26L whichever is later, turn left heading 180°, then as directed by ATC.

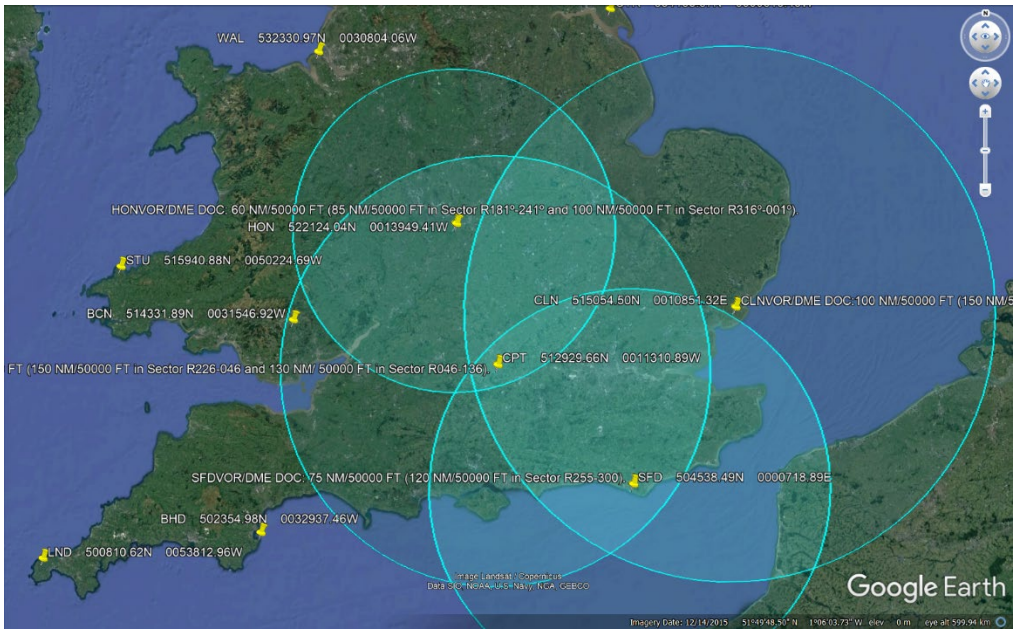
RCF: Proceed as above and continue on heading 180°, 2 minutes after initiating missed approach or passing I-WW DME 7, whichever is later, proceed to MAY VOR not above 3000'.

Runway 08R/L

Climb to 3000' - straight ahead until passing 2000' or 1NM inbound RW08R whichever is later, turn right heading 180° then as directed by ATC.

RCF: Proceed as above and continue on heading 180°, 2 minutes after initiating missed approach or passing I-GG DME 7, whichever is later, proceed to MAY VOR not above 3000'.

11 Appendix C: Navigation Aid Study

Option	Redefine on other NAVAIDs
Description	The procedures identified in the impact assessment in Section 5 would be redefined using other available NAVAIDs. This would require an Airspace Change, and an Approved Procedure Designer (APD) to redesign all procedures identified in Section 5 which would then require regulatory approval.
Option applies to	All impacts identified in Section 5 of this document
Risks	• Due to NAVAID rationalisation, there are very few NAVAIDs available and therefore coverage and resilience of coverage are a major concern. Unless all IFPs can be redesigned on other NAVAIDs this option does not solve the overall issue. • Redefining based on other NAVAIDs could result in changes in tracks over the ground due to the way procedures are coded for FMS overlays. • In the long term, there is a requirement to move from Conventional Navigation to PBN, this could be considered a backward step. • Full details of NAVAID coverage post 2022 are yet to be provided by NERL. • To redesign all procedures using other NAVAIDS would be a significant piece of IFP work and an ACP which would not align with the long term aims of airspace modernisation.
Option Analysis	The option to redefine the existing arrival and departure procedures on other NAVAIDs has been explored through a feasibility study. The below figure shows a map of the coverage remaining after NAVAID rationalisation. This is based on the VOR's DOC published in ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE of the eAIP (Effective 22nd Dec 2021):  *Figure 1 Remaining VOR coverage following rationalisation* We have undertaken an IFP study to understand the feasibility of redefining Gatwick's procedures off other NAVAIDs.

The study took example procedures, the 26L LAM SID and the SFD and initially reviewed whether the LAM procedure could be replicated using the remaining NAVAIDs.

The study found that the first turn could not be replicated in its entirety and the nearest radial was the CLN R234 which would alter the tracks over the ground. The SID would then significantly change from current day as the nearest radial to reach LAM is the SFD R001 (approximately 20km track difference at the turn).

Figure 2 is provided as an example and shows the nominal centreline of the departure routes in blue. In green are the closest VOR radials available to replicate the LAM SID using the remaining NAVAIDS.

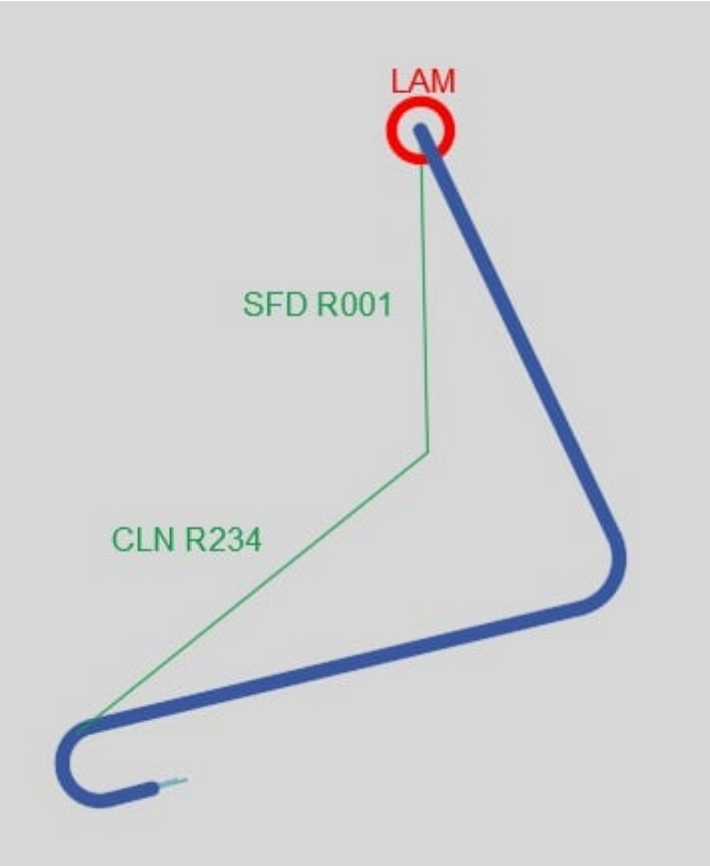


Figure 2 IFP Study of LAM SID

Following review of the VORs, a study was undertaken for the NDBs which found that there was not sufficient remaining NDB coverage for these to be used as an alternative.

Overall, the study found that the procedures could not be replicated using radials from the remaining DVORs or NDBs and that any attempt to replicate using the remaining NAVAID coverage would, for these procedures, result in changes to tracks over the ground.

This would mean that the option of redefining procedures using other NAVAIDS would require a Level 1 Airspace Change as there would be a change to tracks over the ground. Furthermore, the process of undertaking the IFP development for the redefinition on other NAVAIDs for all procedures and the associated Airspace Change, is expensive and time consuming.

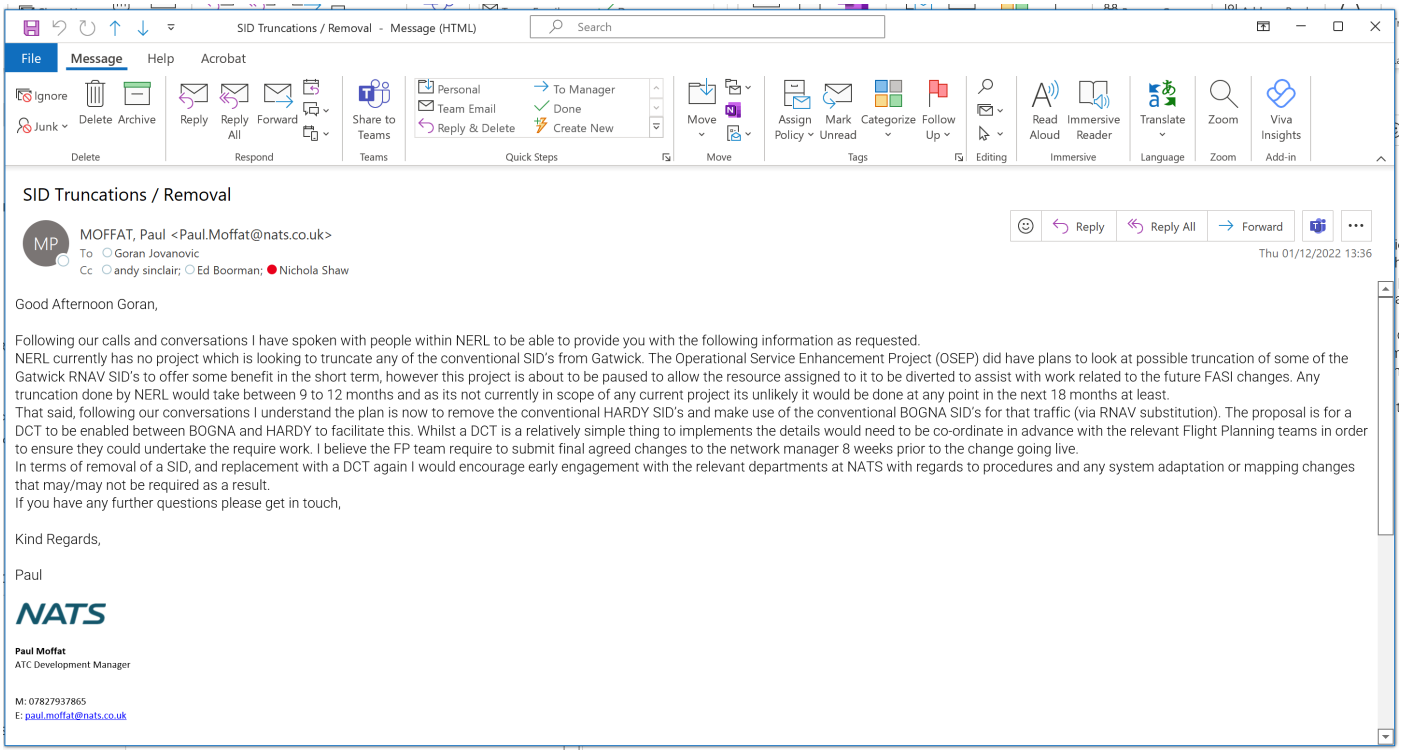
When this is balanced against the planned FASI-S ACP and the overall aim for Airspace Modernisation moving away from conventional navigation, it is not considered practically or economically viable for the departure and arrivals procedures to be redefined on other conventional NAVAIDs.

With regards to VRPs, there is VOR coverage across the LTMA and therefore VRPs could be redefined using other NAVAIDs if there is a requirement from airspace users to do so, however due to the limited coverage this would likely result in a change in the position of the VRPs and would require a separate ACP.

Overall, redefining off other NAVAIDs is not considered a feasible option for the balance of the impacts because:

- The NAVAID IFP study has shown that the existing routes cannot be replicated and there will be changes to tracks over the ground.
- This will require a Level 1 ACP which will not meet the timescales of NAVAID rationalisation.
- Due to NAVAID rationalisation, there are very few NAVAIDs available and therefore coverage and resilience of coverage are a concern.
- In the long term, there is a requirement to move from conventional navigation to PBN and therefore this option does not align with the overall direction of airspace modernisation.
- There is a risk that further NAVAIDs could be withdrawn in future, given the long-term aim to move towards PBN.
- This option would be high cost and high effort and would be unlikely to be feasible by December 2023, which given the above, suggests that other options would be more suitable and proportionate.

12 Appendix D NERL Engagement



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SID Truncations / Removal

MP

MOFFAT, Paul <Paul.Moffat@nats.co.uk>

To Goran Jovanovic

Cc andy sinclair; Ed Boorman; Nichola Shaw

Reply | Reply All | Forward

Thu 01/12/2022 13:36

Good Afternoon Goran,

Following our calls and conversations I have spoken with people within NERL to be able to provide you with the following information as requested.
NERL currently has no project which is looking to truncate any of the conventional SID's from Gatwick. The Operational Service Enhancement Project (OSEP) did have plans to look at possible truncation of some of the Gatwick RNAV SID's to offer some benefit in the short term, however this project is about to be paused to allow the resource assigned to it to be diverted to assist with work related to the future FASI changes. Any truncation done by NERL would take between 9 to 12 months and as its not currently in scope of any current project its unlikely it would be done at any point in the next 18 months at least.
That said, following our conversations I understand the plan is now to remove the conventional HARDY SID's and make use of the conventional BOGNA SID's for that traffic (via RNAV substitution). The proposal is for a DCT to be enabled between BOGNA and HARDY to facilitate this. Whilst a DCT is a relatively simple thing to implements the details would need to be co-ordinate in advance with the relevant Flight Planning teams in order to ensure they could undertake the require work. I believe the FP team require to submit final agreed changes to the network manager 8 weeks prior to the change going live.
In terms of removal of a SID, and replacement with a DCT again I would encourage early engagement with the relevant departments at NATS with regards to procedures and any system adaptation or mapping changes that may/may not be required as a result.
If you have any further questions please get in touch,

Kind Regards,

Paul

NATS

Paul Moffat
ATC Development Manager

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E: paul.moffat@nats.co.uk